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PENNSYLVANIA GAME NEWS

JANUARY, 1958

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THE STORY BEHIND THE COVER

ALTHOUGH the quartet of furred characters on the front cover are legally (and correctly) classified as predators, they add intrigue to the winter woods and challenge to countless Keystone State outdoorsmen. All are characterized in the true sense of the word as "being addicted to or living by plundering, pillaging or robbery." And like all thieves, robbers and murderers (both animal and human), these four should and must be controlled. But the question involves not so much "why" as "how." For many Pennsylvanians the best and most satisfactory answer is captured in the spirit of the chase.

The red fox is well-known to everyone. He has long been the controversial subject of both fable and fact. Pursued avidly by huntsmen and trappers, this wise guy of the wild has survived both and is probably as abundant now as he ever was in Pennsylvania. His gray relative is also no stranger to those who travel the winter woods. He has long been known for his tree climbing ability and normally does not provide as fine a chase as his red cousin. Yet he too can fully test the skill and patience of his pursuers. Both foxes have had a bounty on their heads almost from the beginnings of Pennsylvania history.

The fearsome feline painted below the foxes is not a lynx, as some would call him, even though his scientific name includes the word. The bobcat, or wildcat, was once forced almost into oblivion throughout Penn's woods but with the removal of the bounty from his head in 1937, he was saved from such an ignoble fate. Normally a resident of remote forest areas, the bobcat lives largely on rodents (including rabbits and hares) and carrion (including deer). Present in very limited numbers here, he constitutes little, if any, menace to Pennsylvania's deer herd although he no doubt takes weak or diseased whitetails in severe winters. In recent years a growing fraternity of wildcat hunters have found days of real sport afield pursuing this clever cat through the winter woods.

Last but not least of the predators is the weasel, shown on the cover in both its summer and winter coats. Technically known as the New York Weasel, he is the "nemesis of nature's little people." A killer in every sense of the word, this tiny predator makes up in savageness what he lacks in size. A weasel preys on every living creature which he can catch and kill, including almost everything from a turkey to a sparrow and from a rabbit to a mole. Unlike the other cover subjects, the weasel is not sought because of the sport he offers but he does present a constant challenge to the trapper. There is no bounty on his head in Pennsylvania at present, but he is still a prize catch on the trapline and still remembered as the "ermine"—characteristic symbol of royalty.

All these, then, are interesting and valuable parts of Pennsylvania's wildlife heritage. In January, especially, they are known for the sport and challenge they offer to humans. For a time now these four become the hunted rather than the hunters.

PENNSYLVANIA Game News

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Pennsylvania Game Commission
Commonwealth of Pennsylvania
GEORGE M. LEADER, *Governor*

★

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PENNSYLVANIA GAME NEWS

Will JohnsEditor
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Cover Painting

By

Earle Poole

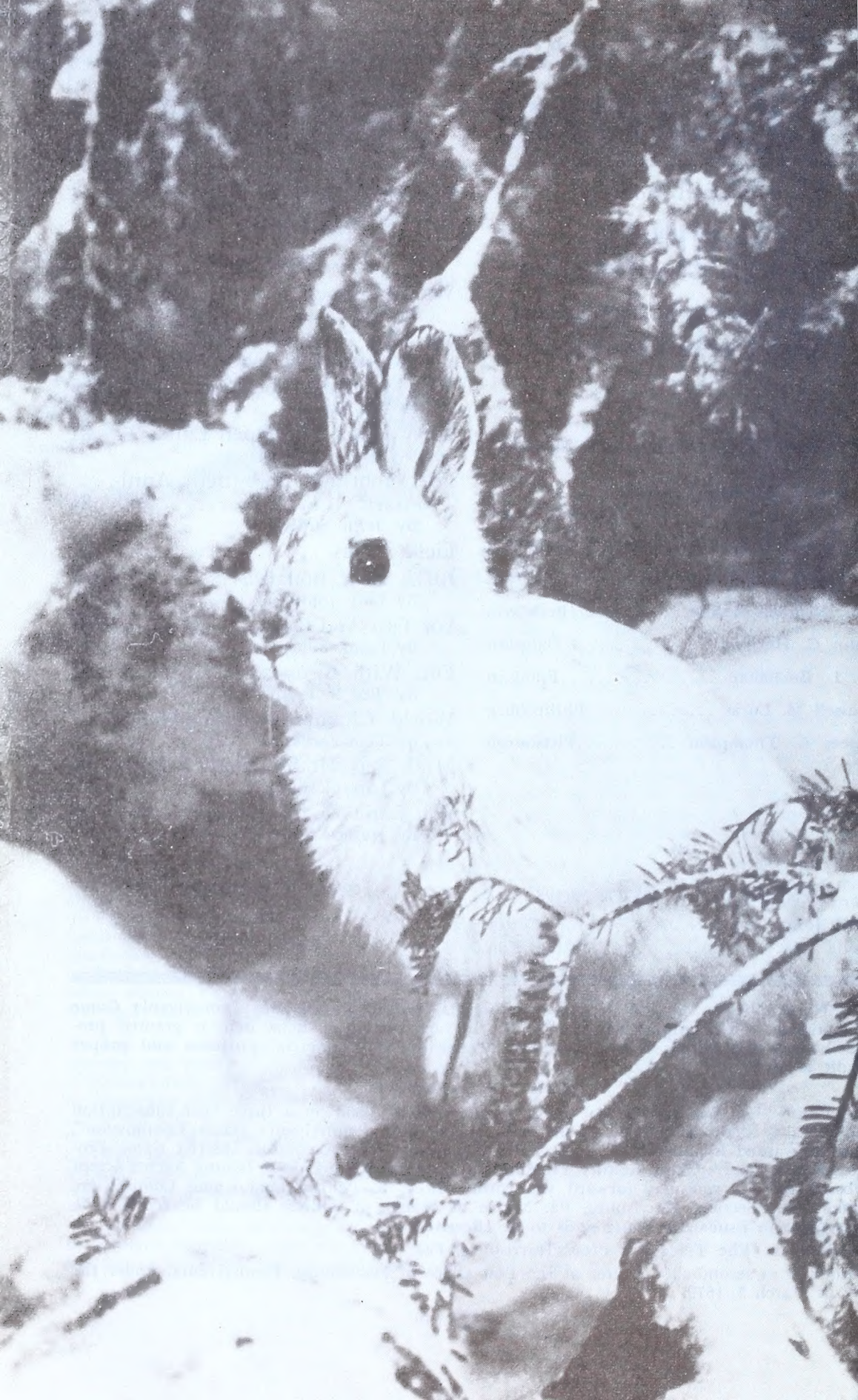
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Editorial . . .

Time of Beginning

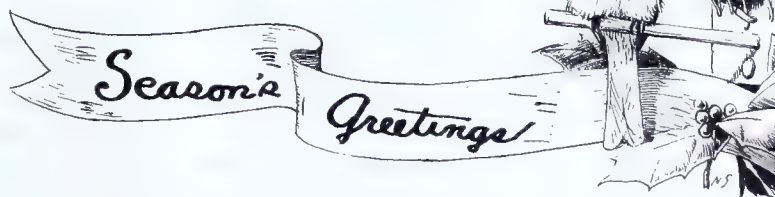
FOR too many sportsmen, the seasons of outdoor enjoyment seem to be over. Guns have been oiled, cleaned and stored away; hunting dogs confined to kennels or other winter quarters; hiking boots and footwear for field and forest relegated to closets. The old year is done; the new year of sport afield yet to begin.

January—the Snow Moon of the Indians—is heralded by much indoor activity and celebration. But opportunities for outdoor pursuit of relaxation and recreation still beckon those with awareness and understanding. For them, hunting knows no closed seasons.

After each fresh snowfall, the winter woods and fields record the ways of wildlife. Secrets that nature has safeguarded and hidden throughout the rest of the year are now unfolded on the clean white pages of a winter wonderland. For those who simply want to walk and watch, this is ample invitation to outdoor pleasure.

For the hunter, there is full measure of sport following the fox hounds or calling crows or trailing wildcats. The trapper knows the beauty and intrigue of winter as well. When he follows his “line” along the ice and snow covered waterways, there is full measure of insight and understanding the mysteries of nature.

Opening days, then, are not months away. The thrill and excitement of autumns hunting seasons need not stop with an old year’s ending. The call of the outdoors is as strong in January as it is in June or November. Pennsylvania is still a wonderland for sport and adventure, even in winter. Here are year-round opportunities for outdoor pursuits of happiness; here the anticipation of a Happy New Year in the world of field sports need not be postponed till another day or season.





WALKIN' SHOES

By NED SMITH

Tracks, and How to Read Them

EVERY hunter worthy of the name is, or at least believes himself to be, an expert at reading tracks. Comfortably ensconced in his easy chair beneath a halo of pipe smoke he finds it easy to imagine himself the equal of D. Boone in deciphering each line of footprints that marks the snowy forest floor.

Unfortunately, most of us aren't so skillful when actually faced with the task. For instance, we should be able to correctly answer all the questions listed below—any reasonably good tracker could. But can we? Can you? (The answers are found at the end of the article).

1. How can the tracks of a ruffed grouse be distinguished from those of other upland game birds in Pennsylvania?

2. What mammal has a thumb on each hind foot?

3. What is the smallest mammal track you are likely to see?

4. Suppose you find deer tracks in which the footprints are evenly spaced about 18 inches apart. Was the deer walking, trotting, or galloping?

5. Why is the varying hare called a "snowshoe rabbit"?

6. How does the placement of the forefeet differ in the tracks of the

gray squirrel and the cottontail?

7. What fur-bearer has webbed feet that attain a length of six inches?

8. Toe drag in a deer's track is an indication that the animal was sneaking. True or false?

In the days that follow the close of deer season many a rugged outdoorsman has succumbed to the lure of the living room simply because he knew of nothing exciting to do elsewhere. Tracking is the perfect solution to this deplorable situation. As a hobby it will rekindle one's interest in the Great Outdoors and at the same time deliver one from the usual Saturday ritual of painting window screens, repairing toaster cords, and the like. From a practical standpoint it is a valuable aid in locating good hunting or trapping territory. But for any purpose, the tracks must be read correctly—and that isn't always easy.

Determining what creature made the track is the first step. Unfortunately, this often proves difficult when the snow is too deep or powdery to leave the detailed impression of the footprints, but in many cases the pattern or arrangement of footprints will provide equally positive identifi-

cation. For instance, the wiggly trail of an opossum waddling through the snow is unmistakable even though no details of the individual footprints are visible. The same holds true of the diagonal shuffling pattern of the skunk or the widely spaced prints of a frightened deer.

After identification, the gait, or speed of travel should be determined. The walking step is usually represented by a more or less staggered arrangement of alternating right and left footprints (Figure 1-d). Some animals, like the deer, customarily place their hind feet directly in the footprints left by their forefeet. Others, like the bear, do not. Remember too, that a change in speed will oftentimes throw these prints in or out of register.

The track left by a trotting animal usually resembles a walking track in which the individual footprints are

spaced farther apart. When an animal lopes or gallops the footprints are commonly grouped together in fours, an exception being those creatures whose hind feet obliterate the imprints of the forefeet. Figure 1-f illustrates a four-print group (z) and the rear print of the next group in a galloping pattern. The distance between the sets of footprints (x) is directly proportionate to the speed. For instance, with an easily loping deer the distance might be as little as four or five feet, while a hard running deer might increase this measurement to fifteen or more feet.

Once the gait is determined the story begins to unfold. Each animal or bird has a characteristic gait when undisturbed. Deer, 'possums, bear, raccoon and many others walk. Rabbits, squirrels, otters, mink, and weasels bound or hop. Foxes trot. Any departure from this usual gait



NED SMITH

FIGURE 1 - DEER TRACKS

COTTONTAIL

3-4"

HOPPING SLOWLY

RUNNING HARD

SNOWSHOE RABBIT

5"

IN DRY SNOW

IN FIRM SNOW

GRAY SQUIRREL

MORE THAN 2"

DUG UP NUT BURIED

RACCOON

3-4"

HIND PRINT OBLITERATES FOREFOOT PRINT

ANOTHER COMMON PATTERN H.I.D AND A FRONT FOOT PAIR

OPOSSUM

2 1/2 - 3"

TOE

IN FIRM SNOW

IN DEEP DRY SNOW

SKUNK

2"

DARCIAL ARRANGEMENT IS MOST COMMON

ANOTHER PATTERN

WEASEL

1-1 1/2"

IN THIS ARRANGEMENT HIND PRINTS OBLITERATE FRONT ONES

ABOVE PATTERN RESEMBLES SMALL RED SQUIRREL'S BUT HIND FOOTPRINTS ARE CLOSER TOGETHER

MINX

1 3/4 - 2 1/4"

ABOVE - COMMON PATTERN

THIS TRACK DIFFERS FROM GRAY SQUIRREL'S CHIEFLY IN NARROWER SPREAD

MUSKRAT

3 1/2"

TAIL MARK

TAIL MARK

WALKING - HIND PRINTS USUALLY COVER FOREFOOT PRINTS

HOPPING

FIGURE 2

NED SMITH

should be investigated, for it usually signifies a major or minor event in the travels of the creature whose tracks are under observation. If a deer suddenly breaks into full flight it can be assumed that it was frightened. By what? A search of the surroundings should reveal the answer.

The fox leaves a fascinating trail. His meandering is frequently interrupted—here to test the wind, there to visit a favorite “scent post.” At one place he digs through the snow for a hidden morsel, at another he pounces on an unsuspecting meadow mouse.

Trails of other wildlings will reveal as much. It's merely a matter of observation and imagination. When the tracks indicate something out of the ordinary, find out what happened and why. Therein lies the fascination of tracking.

In the accompanying illustrations unnecessary detail has been deliberately eliminated. Instead, identification by general shape, size, and arrangement of footprints—features that are not easily lost in powdery snow or in weathered tracks—has been emphasized. The tracks in Figure 1 are travelling toward the top of the page, while those in the other illustrations are moving from left to right. Sizes given are only approximate. In nature they vary widely in individuals.

With the illustrations before us let's discuss the characteristics that will aid in identifying and interpreting the tracks you're likely to meet up with in your woodland travels.

Deer. Figure 1-a shows an *exceptionally* large footprint. While size alone in a poor criterion of determining sex it is safe to assume that a print of these dimensions is that of a buck. By comparison, the normal doe track (1-b) looks quite diminutive. Heavy bucks, even those whose prints are not excessively large, can often be recognized by their noticeable toe drag, even in a light snowfall (1-h). This only applies to heavy or old bucks. Those of normal size

can seldom be distinguished from does by their tracks.

Figure 1-g shows the tracks made by a grazing deer, or one feeding on fallen acorns. The widespread legs, particularly the forelegs, are characteristic of a deer nibbling food from the ground.

1-c shows the footprint of a running deer. Note the spread hoof and the imprints of the dewclaws.

The only animal whose tracks are likely to be confused with those of the deer are the elk, and this animal is found in only a few localities of Pennsylvania. Aside from its larger size elk footprints are considerably more rounded than those of the deer.

Cottontail. Hind legs long and narrow. Front feet are usually placed one ahead of the other.

Snowshoe Rabbit. Snowshoe-shaped hind foot. Pattern like that of a cottontail. Size, unbelievable.

Gray Squirrel. Often confused with cottontail by the novice, Hind feet shorter, broader, turn outward more than rabbits. Forefeet paired, often-times joining hind prints. Hind foot of gray squirrel more than two inches long; that of red squirrel less than two inches long.

Raccoon. Walks on sole of hind foot. Toes prominent. Size alone will usually identify it. Pattern on right (figure 2) is common and distinctive.

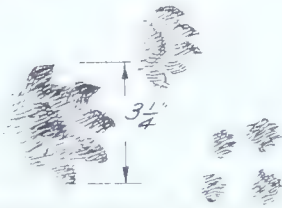
Opossum. The “thumb” print on the hind foot immediately identifies this track when it can be seen. In deeper snow the wavy track is unmistakable.

Skunk. Another critter that walks on the sole of its hind feet. Long claws of frontfoot usually show. Diagonal pattern is a good identifying mark.

Weasel. Similar to, but smaller than tracks of the mink. The narrow straddle distinguishes both weasel and mink tracks from those of the squirrels.

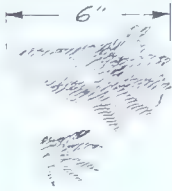
Mink. Don't overlook the fact that the *location* of tracks often serves

OTTER



"TROUGH" PLOWED
THROUGH SNOW

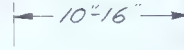
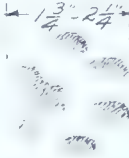
BEAVER



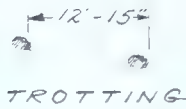
IN SHALLOW SNOW

IN DEEP SNOW

WILDCAT

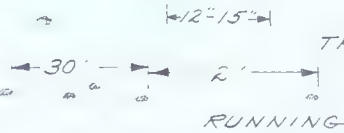


RED FOX



TROTTING

GRAY FOX



TROTTING

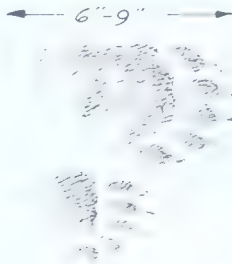
RUNNING

DOG



TROTTING

BEAR



WALKING

RUNNING

WHITE-FOOTED MOUSE

MEADOW MOUSE

SHREW



FIGURE 3

VED SMITH

to identify them. A mink is quite fond of water and thinks nothing of repeatedly plunging into a frigid trout stream in wintertime. You won't catch a squirrel doing that!

Muskrat. Here again habitat will offer a valuable clue. The prominent toes and tail drag are distinctive, although the latter is not always apparent. Footprints are often arranged in a haphazard manner.

Otter. Keep in mind that the otter is extremely short-legged. In snow of more than several inches in depth his long body makes a continuous or interrupted trough in the snow.

Beaver. The beaver, too, plows a trough through deep snow. His huge webbed hind feet will at once distinguish his trail from the otter's. In snow of any depth the broad flat tail tends to partially erase the footprints.

Wildcat. The tracks of all cats can be distinguished from foxes and dogs by the absence of claw imprints. Larger than domestic cat, and the heel pad is lobed. Front and rear prints may or may not register.

Red Fox. Foot heavily furred, cleft between toes and heel not as deep as in gray fox or dog. Footprints of foxes wander about more than dog's, are arranged more nearly in a line (narrow straddle). Transverse bar on red fox's heel pad is often noticeable when other features are not distinct. Feet less round than gray fox's.

Gray Fox. Smaller than red fox footprints. Pads larger, track even more meandering than red's. Pads smaller than dog's.

Dog. Some small dog tracks are hard to distinguish from fox's. Straddle is wider and pads larger than fox's. Trail usually follows a more direct route.

Bear. There's nothing with which you could possibly confuse these ponderous prints. Size alone assures identification.

White-footed Mouse. A common hopping track often met with in woodlands and old fencerows.

Meadow Mouse. The common field vole of the weedy places. More inclined to walk or scurry than to bound. Spends much of its time in

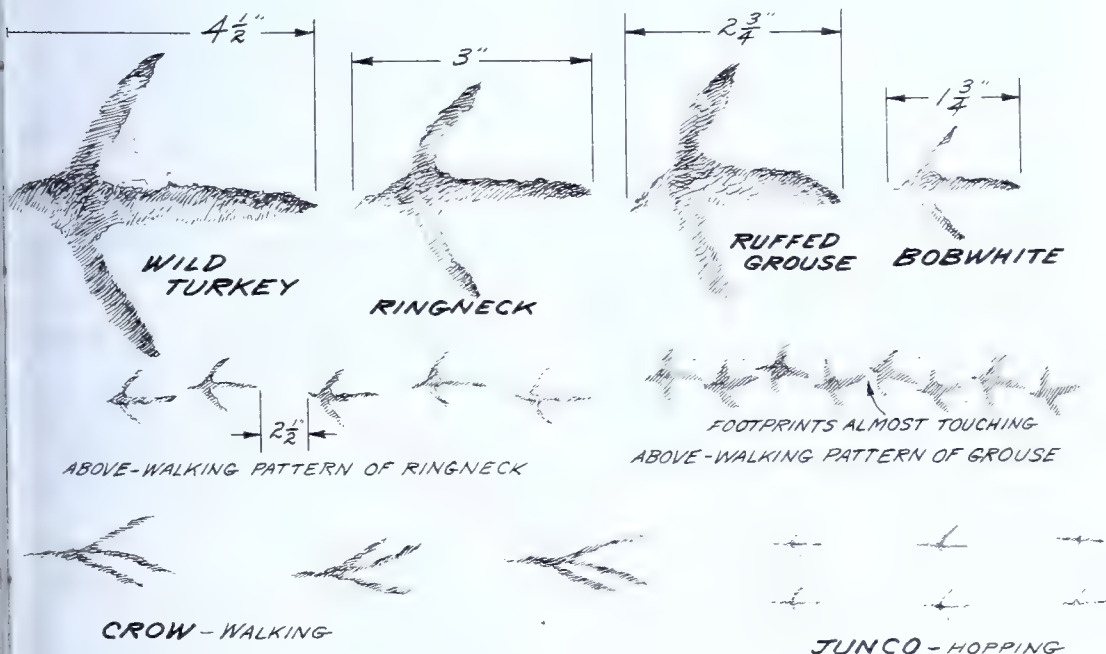


FIGURE 4

tunnels under the weeds and grasses.

Shrew. Our tiniest mammal. Often tunnels just beneath surface of snow. Because of short legs the shrew commonly plows a trough through soft snow. Tracks resemble miniature white-footed mouse tracks.

Wild Turkey. All upland game birds have similar footprints, except for size. Turkey prints vary considerably in size, those of the hens measuring less than $4\frac{1}{2}$ inches in length, the gobblers more than $4\frac{1}{2}$, generally speaking.

Ringneck. Pheasant footprints are more slender than those of the wild turkey, although those of a small turkey hen and a large ringneck cock can be very hard to tell apart. In general shape, the middle toe of the ringneck is proportionately longer and slimmer.

Ruffed Grouse. The horny fringe around each toe which grouse acquire in winter gives their footprints a characteristic broad-toed appearance. The stride is very short.

Bobwhite. Closely resembles a miniature pheasant track.

Crow. A track commonly met with in the winter woods and fields. Inner and middle toe nearly parallel. Usually walks, although occasional hops are noted.

Junco. A common winter bird, shown to illustrate the difference in pattern between a walking and hopping gait.

In reading tracks you are bound to discover some that do not conform to the descriptions or illustrations found herein or elsewhere. Remember that there is not only consider-

able individual variation in the size and shape of footprints, but also in the patterning. For instance, in trotting some deer register their fore and hind prints perfectly, while others leave separate imprints of all four feet. The depth and condition of the snow often alters the appearance, spacing and arrangement of the footprints. Under adverse conditions identification will often depend on combining a number of clues rather than a single detail.

Camera bugs will enjoy making a photographic record of the tracks they discover along the way. A small pocket rule or a familiar object can be included in the picture to illustrate by comparison the size of the footprints. A yellow filter will make the most of the snow's subtle shading. If possible, take your snapshots during the early morning or late afternoon hours when the low angle of the sun will cast shadows in the imprints.

The Answers

1. By the width of the toes due to their horny fringe.
2. The opossum.
3. The track of the shrew.
4. Walking.
5. Because of its large, snowshoe-shaped hind feet.
6. The squirrel's forefeet are paired, the cottontail's are placed one ahead of the other.
7. The beaver.
8. False. Toe drag is characteristic of a heavy buck.

... The End





On the Track of a Cat

By Leonard Randolph

THE dog circled for a minute, then picked up the half-cold trail of the animal. Hunched forward in the sharp chill of the morning, she waited poised, shivering with the cold and the sudden, hot thirst for hunting.

A split second later "Pocono Nell," six-and-a-half year old Bluetick Walker Foxhound, was off through the underbrush and the low-lying marshland of Barrett Township.

This was Monday morning. It was 8:30. "Nell" was taking part in her fifth "classic" hunt in the Canadensis region. With the darting, calculated sense of the good hound on a track, "Nell" dodged and swerved toward the swamp. The men who had stood silently behind her after they set her on the track they'd spotted began to follow, racing a little now and then

as she hurtled ahead of them, catching a hard, strong scent.

The scent of the track had been left by a wildcat the night before. It was still strong enough to keep the dog running, nose down, legs stopping and starting like a patterned machine.

Thus began the 1957 running of a "chase" which has been held annually the past 40 years. It is a tradition from the past, kept alive and meaningful in the hearts and conversations of five men who live in Barrett Township.

The men are lifelong residents of the area. They are carrying on a custom begun years and years ago by their fathers and grandfathers and handed down to them through family ties.

"We were born in it," one of the men says. "I guess you almost have to be. You can't turn a man into a fox or cat hunter overnight."

These are the men: Ray Price, Sr., an auto agency owner; Milton Carlton, hotel owner; his brother, LeRoy,

THIS ARTICLE originally appeared last winter in newspaper form and is reprinted by permission of "The Daily Record," Stroudsburg, Pa., and through the courtesy of the author.

resort garage manager, Joseph Price, resort owner; Stanley VanVliet, insurance broker.

"Nell" belongs to VanVliet. She is a cross-breed of two of the most famous tracking-hound breeds in the U.S. Of the two, "The Walker" is the possessor of the most enviable reputation and is used almost exclusively in the South where hunting to hounds is still a widespread practice.

The men had waited weeks for the "right" morning. Monday was almost perfect.

There was a "fine snow" on the mountain and snow governs such hunting. If you have it, you can spot tracks easily. Without it, there is little hope unless you depend altogether on the senses of the dog.

The five men got together early in the morning by pre-arrangement. They drove to the Promised Land region. Shortly after they got out of the car they found "what we thought was a cat track."

For three hours "Pocono Nell" kept the men following her through the swampy lowland. The long tracking, at top, perceptive speed, is one mark of a good fox-hound. "Nell" didn't let the men down.

At 11:30, she was joined by a second dog. His name was "Old Mac," a dog between 16 and 18 years with "a lot of mileage on him." "Old Mac" belongs to Joe Price.

Both dogs took off on the track of the cat. About an hour later the cat was "started" fresh—the dogs had found him and frightened him into attempted escape. They were hot on the trail, their bodies lunging forward with new fervor.

Because most "cats" come out only at night, like other wildlife preying on smaller animals, the hunter must run his hounds on a lukewarm track in the daylight, waiting for the dog to get close enough to the cat to startle him into making a new and stronger trail.

The cat lasted a little more than

an hour after "Pocono Nell" and "Old Mac" found him and set him off on a fresh trail.

Out of a clump of underbrush, partly into a clearing, the cat "ran" directly into the path of Ray Price Sr. Price raised his gun.

The cat whipped backward, jolted by the shot, its body twisted jerkily in the grey-brown covering of earth. It was a "pretty big one," the men said. It weighed about 36 pounds even though it was starved thin by a bad Winter season.

The rest of the men heard the shot. Yelling back and forth, they agreed to swing the car around, pick up Price, the cat and the dogs.

"Pocono Nell" and "Old Mac" were snapped together again, on leashes. The dogs dropped, contentedly, a short distance away from the cat after their first howling direct contact with the kill.

The men moved to another area, two and a half miles away, in the afternoon. This time they used a younger dog with "Nell" named "Jeffry." They caught a scent, kept on the trail until 5:30. Then VanVliet called "Nell" back in. The men had to go back at 9 that night to find "Jeff," owned by Ray Price, Sr., who was a "new dog" this year.

To call the dog in they used "fox horns" and, by way of supplement, their own voices. The "horns" in this case are made from the horns of steer. They are traditional, have been used by hunters in England and elsewhere for centuries. The sound emitted by the "horn" is roughly similar to that made by a diesel engine whistle. It vibrates in such a manner that the dog responds instantly, beginning to howl, head back, nose tilted upward, his long throat pulsating with the visible muscular effort of his voice.

For the five Barrett men, the "wild-cat chase" is one of a serious run during each year. The others are unscheduled. This one is always on the docket.

In the hunt this week, the men and their dogs covered an area of about five square miles. It was one of the broadest chases they have had in recent years—and one of the best from the standpoint of performance.

All five of the men look upon the annual event as the keeping alive of an old and valid tradition. They are somewhat philosophical about that.

And there was something a little more than philosophical in the way one of the men talked about it later, after it was over.

Maybe, it's just the thrill of the hunt itself, he said, but I don't think so. You get swept up in this and you're carried on by what is happening. Later you have time to think.

Think for example, that the cat and the dog and the hunter are all a part of a chain of hunting. The cat

begins his night by tracking the path of a smaller animal and the cat leaves his own track behind.

In the morning a dog catches the scent of the track and the dog and the man together, bound by their superiority and their intelligence, track their prey to the hole in the side of the hill or the thick grove of trees until he dies.

And then he lies, dying in the clearing beyond the trees. Looking for all the world, like the rabbit whose life left him beneath the wildcat's claws the night before.

The sun goes down. And, somewhere on the side of a mountain, a cat stirs himself from sleep, stretches his tight legs and his jaws.

Then he moves downward to the ground—and the scent of a new track in the snow.

ANNUAL HUNT held each year since 1917 has become a tradition for these sportsmen as it was to their grandfathers and fathers before them. All residents of Barrett Township in the Promised Land region of the Poconos, they are; left to right: Milton Carlton, Ray Price, Sr., Joseph Price, Stanley Van Vliet and LeRoy Carlton.

Photo by Les Carlton





NED
SWIFT

The Man and the Buck

By Bill Walsh

CONCLUSION

Hunting in "bluebird" weather, the man had passed up several chances to take a deer. His heart was set on the huge buck with the trophy rack that he had seen at the spring near his cabin the night before the season opened. He and his wife had come to their "mountain retreat" which in their twilight years seemed more and more an ideal escape from the tensions of city living. After several days, they had been visited by the Indian, who served as caretaker, and his family for their annual "feast." The Indian had left, predicting a heavy snow was fast approaching and that the man would know how to get the big buck if he looked over the cabin's fireplace . . .

THE man awakened hours later to the fierce howling of the wind. He looked at his watch and the illuminated dial told him it was 2 a. m. A groaning rubbed and worried at the northwest eave of the cabin where a limb of the pine tree he had planted 30 years ago pushed against the cabin. He reminded himself to do a bit of pruning when the weather was right.

And, as men have done since they first took women into their caves in the dimly-lit shadows of antiquity, he looked at the fire. The old, pot-belly stove, banked perfectly with ashes, emitted a steady, cheery glow that warmed his face as he opened the door and peered into its cast iron innards. Satisfied he closed the door and turned to look out of the window. It was pitch black and he could see only those few snowflakes that dashed themselves, like white moths, against the window, reflecting the tiny light of the nightlamp.

He remembered the flood lamp mounted on the front of the cabin to assist in unloading equipment from late-arriving cars and flipped on the

switch. He could see nothing but the snow, driven hard by the wind in streaking, horizontal lines of white, racing past the window.

"Blue Eye was right," he said. Turning off the floodlamp he returned to bed. With no thought of rising in the morning, he slept soundly beneath the warm covers.

Snow fell like fury all the next day. The wind bawled and roared like a drunken logger on his first night in town. The man congratulated himself on the head-high rack of fire logs piled in the shed-like portion of the cabin. Ma insisted on calling the vestibule. And there were enough sacks of the pressed-coal briquets to feed the conservative appetite of the stove for days.

After breakfast, Ma cleared the table and wordlessly set about the dishes. The man got out his briefcase and the notes for the book he had been writing as many another author, without sufficient time to get much accomplished at one sitting. He had stolen an hour here, a half-hour there, from the busy days in town. But this day, with all thought of hunting banished, he looked forward with what almost amounted to a secret jubilation to an entire day and evening to pour out the thoughts that had accumulated in the pile of notes and in the creative reservoir of his brain.

A work of fiction, it was drawn against the backdrop of the out-of-doors—the background the man knew best. While most of the action burned clear in his mind, one problem with the book remained to be solved. He had hoped to describe, once and for all time, the killing of a deer together

with the resolution of the many frustrations and satisfactions this simple act of the hunter accomplishes in the split second it takes for the bullet to reach its mark.

He probed his experience and the remarks of others in a futile attempt to capture what should have been easy. But the essence of the thing eluded him.

He had never killed a deer for the sake of the killing, nor solely for the meat, although he considered it abominable to waste it. As people say, the killing of a deer is for the sport.

But what made up the "sport." He'd be darned if he could paint it in words—simply and concisely—all wrapped up in a crisp little black and white paragraph packed with the power of logic and the innuendo of emotion. You could always fall back on laying it to a lot of things, he thought. The bromides of clean, fresh air funneling into the hunter's lungs, the quickening heart beat at the sight of a deer, the thrill of tracking the animal—and all that.

But how could one picture for others the exultation that clutches the hunter when he walks up to his deer, dead on the blood-flecked snow? And the lump in one's throat, and the tingly feeling that begins at the base of the spine and flashes up and down like lightning, raising the hackles on one's neck, like the sensation one gets when the band plays boldly and the parade passes by?

After unsuccessfully struggling with it, he rose and went to the window, as though watching the storm would lessen it. He could see only the swirling snow. It was as though they occupied a tiny island in the twisting, whirling world of white.

"Must be drifts out there that would bury a man," he told Ma. She went on with the dishes without answering, knowing he spoke mostly to himself.

He went to the shed and brought in a huge log for the fireplace. He

placed it on the fire and stood back, looking at the snowshoes that hung over the mantle. His conversation with Blue Eye came back to him, and old memories began to turn uneasily in their sleep and to awaken.

The Indian had spoken of the time he had killed the big deer. He remembered that now. He and the other fellows were all down for the hunt when a snow like this had fallen for days and the men were helpless in the cabin. When the snow stopped they found they could not travel in it, sinking to their waists with each step. They had surrendered, sullenly, and finished out the week at camp playing poker far into the mornings and sleeping late.

It was Blue Eye who roused them from their slumber in mid-morning of the last day by banging on the door. When they opened it, the Indian stood there triumphantly, a large buck dead on the snow beside him. In the towering drifts, on snowshoes, he had run the animal into exhaustion and finished him off with one shot behind the ear.

And as the snow continued to fall all that day, the next day, and even the next, the idea grew into a scheme and a plan. On snowshoes—if the snow ever stopped, he could outrun any deer in time. It would only be



necessary to visit the usual hemlock stands, pick out the tracks of the big one, then run him down.

But the captivity enforced by the snow began to wear on him and the night before the final day of the season found him in bed early, not a bit tired, but forcing himself to sleep against the possibility the blizzard would cease and he could hunt next day.

It was past midnight when the man stirred in his slumber, then awakened. He threw back the covers, wiggled his toes into the deep, warm pile of the sheepskin slippers, and crossed the room to check the fire in the pot-belly stove. It was well banked and needed no attention. He went to the window.

The snow had stopped falling. Stars burned clear and crisp. A slim, cold toenail of a moon hung low in the west.

And a well of glee gurgled up within him as he turned and looked at the snowshoes. He took them down, inspected them, and found them perfect. He laid out the heavy clothes he would need against the cold, then slipped back into bed. But it was a long time before he slept.

Next morning he arose early and ate a hurried breakfast. He dressed quickly and impatiently—humming to himself. Finally he was ready.

He went to the gun rack and took down the light carbine, a .32 Special.

"Won't need a 'scope for this job," he told himself, certain of victory. With the snowshoes the big buck would have no chance. The memory of that other big snow assured him of that.

In the shed he fastened the shoes and walked outside. A hard crust had formed on the snow and he skimmed over the hard surface without apparent effort. The sun glared hard and bright, glancing off the snow to sting his eyes. He stopped and put on his sunglasses. The odds piled in his favor now. He snapped a dead



NED SMITH

limb from a sumac pushed it through the crust and down until it would go no farther. Pulling it out he estimated the depth at three feet.

"The deer will be up to their bellies in this stuff." Again the feeling of anticipated victory engulfed him. The disappointments would be swept away today. He began the climb up Logger Hill. He kept to the road until he reached the shelf on which the hemlocks grew. He knew the deer would take refuge there where the snow had not piled so deep. But he would rout them out and follow them until they foundered with exhaustion. It would not be too hard to find the buck.

While he was still some 50 yards from the spot he had wisely selected as the place the deer had weathered the snowstorm, a doe whistled and broke from the cover, wallowing in the snow with each downhill bound. Five others followed her. Baffled by the depth of the drifts, they stopped scarcely 30 yards from their starting point and turned to look at the man. Their bellies nestled in the snow. They wanted no more of this kind of travel. But the buck was not with them.

Ignoring the antlerless deer, the man circled uphill and to his left around the hemlocks. Halfway around the far side he came upon the tracks of a big buck who chose not to travel with the others at the man's approach. He could read the splendid effort that went into the making of the tracks. The imprint of the buck's belly lay between each set of fore and hind hoofprints, and the leg holes went down into the snow as though someone had made designs with a broom handle. From the size of the tracks, the man was certain this was the one of his choice.

Despite the effort it must have taken, the big buck had not hesitated in his escape. He was nowhere in sight and his tracks led to a smaller stand of hemlocks some three hundred yards or so up the hill. The man took the trail, walking briskly on the shoes. Without them he would have sunk waist-deep at each step.

The tracks led through the hemlock clump and out the other side, straight up the hill.

"This fellow's got stamina," the man told himself, wanting more and more to bring the deer to gun. He

pursued relentlessly, knowing it was only a question of time.

He pushed hard on the trail now, slowing only as he entered the stand of hemlocks. The tracks veered to the left and down a short ridge on which the evergreens grew. He followed quickly, noting several flecks of blood on the snow where ice crust had lacerated the skin on the animal's legs. As he broke out of the hemlocks he expected to see the deer in the opening that stood between them and a stand of mixed second-growth. But there was only the wide expanse of snow and the tracks led unswervingly into the hardwoods.

The deer had been running steadily, with no sign of a pause for about a half-mile at this point. "I thought I'd a had 'im by now," the man spoke aloud. He pushed on, confident he'd spot his prey in the woods below. For about four hundred yards straight through the second-growth the tracks led him. He kept looking far ahead for a glimpse of the animal—but it didn't come.

Out of the woods on the other side, the terrain sloped into a swamp. Instinctively, the deer had headed for its sanctuary—which at any other time of the year it would have provided. "He's a goner if he goes in there," the man chuckled, "and it looks like he's gonna do it." He pressed on over the hill—then stopped.

His head low with the weight of the magnificent rack; exhausted from battling the drifts of snow, the buck of the spring stood facing the man. The snow in the swamp, even deeper than on the hillside, gripped the deer more than belly deep in its treacherous trap. He was helpless.

"You've lost your case, buddy," the man told him aloud as he neared the deer. The sound of the man's voice stirred terror in the great heart of the deer. He struggled in the snow, made several bounds farther away, then stood motionless. His tongue lolled and the man could hear the animal's



heavy breathing. Steam seemed to pour from his nostrils as the hot breath met the still-cold air.

The man raised the gun to his cheek.

At that moment he caught a flash of red-brown motion from the corner of his eye. He wheeled to see a fox streaking across the top of the snow. Flipping off the "safe" he picked up the running target, swung with it, and squeezed off. A puff of white showed him he had fired over the varmint's back. He bore down again, swung with the speed of the animal's escape—holding a bit lower. This time when he squeezed the trigger the fox tumbled and rolled its own length several times before lying still.

"One less fox," he said to himself, pleased at the marksmanship he had displayed. "That was tough shooting."

He looked at the deer. "Well, better get this over with. This won't be quite so tough—more like shootin' fish in a barrel."

With his rifle halfway toward shooting position, the import of his words struck him for the first time. He struggled to put it out of his mind, but the gun assumed tremendous weight and no amount of tugging would get the butt on his shoulder.

"Darn it," he cursed himself. "Shoot the deer and let's get him back down to camp. This is the last day to get a buck. This is what you've been working for."

But one of the man's better traits was an ability to quickly face the facts, and the realization that he could not shoot the deer swept quickly over him—and he quickly accepted it. It was true that his wits had taken him to the place he knew the buck would be. It was true his wits had put the snowshoes on his feet. He had run the deer down, so to speak. He should get some reward.

But it became apparent to him that he had already reaped that reward, the privilege of seeing the magnificent animal so near, and the thrill and



the satisfaction of having laid his plans so well. But it would never be to shoot the buck. He'd have to settle for a doe tomorrow.

He circled the buck, not getting too close. Frightened and angry deer have cut men to ribbons with their hooves and gored them with the stout antlers. There was little chance of the buck harming the man in this instance, but the man took no chances. He admired the size of the animal and the spread of the rack. He counted the points, talking to the buck half under his breath, excitement pounding hard in his veins:

"Fifteen points, eh? I had you pegged for a fourteen-pointer all right, but you've got an extra one on the right side."

The deer turned his head and followed the man with baleful eyes as he walked around him. He refused, however, to turn and face him as he walked behind him. He tossed his rack impetuously and looked longingly, it seemed, at the distant hemlocks. The man took one last look, feeling that his strategy owed him a bit of gloating, then he turned and went off down the hill without glancing back.

"Never have a camera along when I should," he muttered under his

breath. "The boys would think it was taken with a telephoto anyway."

When the man had been gone from sight for some time the buck lay down in the snow and rested.

* * *

Bright and early the next morning a rifle shot rang out near the top of Logger Hill. Twenty minutes later the man had completed his task at the site of the kill and was off down the hill toward camp, sledding a yearling doe behind him.

Ma had heard the shot and waited at the door.

When the deer was hung on the apple tree, the man went to the woodshed and came back with a stick with which he propped open the chest cavity to allow air to circulate inside. He got a bucketful of clear water from the creek and a clean dish towel from inside the cabin. Wetting the rag he scoured away the excess of dried blood along the ribs and the spine. Then he wiped away the water with a dry rag.

With the sharp hunting knife he carefully removed the backstraps—the venison filet mignon. He took them in to Ma.

"Here's dinner," he licked his lips. "I'll peel the potatoes and mash 'em when they're done. You can fix the salad."

"My you're in high spirits," she winked.

"It's been a good day."

* * *

By noon the following day the car was packed, the deer slung on the car top carrier which carried his canoe in the summer, and the man and his wife made a last minute check

around the cabin and the grounds to look for forgotten articles. Finding none, they spent a few more minutes just looking around, eager to get home, yet wishing they could stay. This was to be their home in their years of retirement—drawing closer with each visit. They looked forward to it.

The man spread his tire chains out behind the car, backed onto them, and made the necessary fastenings.

"Let's go," he said. "Gotta long way to travel."

On the highway the chains chattered violently vibrating the car even at slow speed. He pulled off at the first service station. The attendant came out and appraised the deer as he crossed in front of the car.

"That's a dandy doe, Mister," he grinned. "Didn't see a buck, huh?"

"Not one that I'd want to shoot."

"Too bad. I s'pose you want these chains off?"

"After you fill 'er up and check the oil. We'll wait inside."

When they were back on the road, Ma turned to the man and smiled. "It was nice the way you explained about the buck without lying to the man."

He looked at her in surprise. Then he realized that he hadn't fooled her for a minute and that after 30 years she knew him better than he knew himself. He motioned her closer to him and she snuggled against him, her head on his shoulder. As they sped toward the city he told himself:

"It was a perfect hunt—a PERFECT hunt!"

. . . The End.





They Hunt the Open Lands

By W. Boyd Tobias

SHORTLY after dawn on a crisp winter morning more than 50 men in heavy woolen hunting garb, all of them armed with shotguns, milled about in a lane between a farm house and barn. Among them were four men with hounds on leashes.

The cars in which they arrived were parked all along the lane, along with a stake-body truck. One of their number mounted the truck and the men with shotguns faced him.

"We'll hunt today eastward toward Rote," he announced. And then he launched into detailed instructions to dog owners, drivers, and watchers.

All this was the beginning of the third fox hunt of the year by the Virginia Hunt Club which, despite its

name, hasn't a Virginian on its rolls and is probably the largest hunting club in the Commonwealth without a clubhouse and minus a single acre of private hunting ground.

Most of the club members live in Clinton County, where all of their hunting is done. But on this, the third and last fox hunt of the winter of 1957, they were joined by sportsmen of Lycoming, Northumberland, Snyder, and Centre Counties. In some instances there were three generations of the same families—grandfathers, sons, and grandsons.

During this, as in similar hunts on New Years Day and the first Saturday in February, the participating sportsmen covered many miles of

farmland with the object of reducing the fox population in the area beyond Lock Haven. In all three hunts more than 50 experienced hunters sought out and eliminated destructive foxes.

The middle of the morning the fox hunters, half of them walking through open fields, hedgerows, and thickets to help the hounds rout out the foxes, and the other half on watches where frightened foxes were likely to follow an escape route, were successful in killing a big male red fox, which was shot by Ted Koch, Sr., of Lock Haven.

The snow which covered the area mapped out for the hunt failed to disclose the number of fox tracks anticipated so after lunch, eaten at the early morning place of assembly, the Clifford C. Vonada farm in Mackeyville, the club shifted its scene of operations to the vicinity of Lamar, farther up the old Bellefonte Pike where the Lamar Federal Fish Hatchery is located.

This proved to be a smart move for by the time the hunt ended late on this Saturday afternoon three more red foxes, two males and a female, were killed by Harry Eisaman, of Flemington; Frank Grieb, of Mill Hall R. D., and Earl Wadsworth, of South Avis. Thus four foxes were seen and all four shot.

Five male red foxes had been killed in the two previous hunts this winter. In the February hunt, between Mackeyville and Clintondale, nine chases were had.

In the New Years Day hunt a dozen hounds nosed through the area beyond Mackeyville and routed nine different foxes, 14 of the hunters having shooting.

Foxes supposedly do not like to get their feet wet, but on the first chase by the hounds one fox swam ice-fringed Fishing Creek in an attempt to escape from the dogs and the close-pressing hunters.

Fishing Creek was unusually high

STRATEGY OF THE HUNT is outlined to the hunters by Clifford Vonada, chief captain for the day, at a gathering on his farm near Mackeyville, Clinton County.





HOUNDS AND HUNTERS start out on the last of the annual fox hunts for 1957. Left to right, the hunters are: Frank Eisaman and J. D. Walker, of Flemington; Edgar Clukey, of Castanea; and Fred A. Wadsworth, of South Avis.

for that season of the year, but the fox negotiated it safely while one of the dogs attempting to overtake the wild animal had to be helped from the swift-flowing, numbing cold creek water.

Prior to each of the hunts permission to range their fields is obtained from the farmers living in the territories to be covered.

The club, which also hunts bear and deer in season, always has three organized fox hunts a season, the first coming on New Years Day. The others are on the first Saturdays of the two following months, the club discontinuing fox hunts when the weather becomes such that cultivated fields are soft and winter wheat and other growing crops could be damaged by tramping over them.

In the group which tramped during the final hunt of the season over now-covered ground in crisp, bright winter weather were farmers, school teachers, ministers, newspapermen, students, employees of Lock Haven industrial plants, and others.

It was Farmer Vonada, chief captain of the March hunt, who from a

truck body forum mapped out the strategy of the fox chases. Other captains of fox chases are George P. Gummo, of Clintondale; Willard Truckenmiller, of Hublersburg; Harry Eisaman, of Flemington; Fred Wadsworth, of South Avis; Edgar G. Clukey, of Castanea; Boyd S. Thomas, of Bellefonte; Robert Boob, of Loganton, and Sherman A. Barner and Philip W. Millet, of Mill Hall R. D.

Predatory animals and birds such as foxes and great horned owls may be shot on any of the hunts of the Virginia Hunt Club and wives, daughters, sisters, sons, and brothers of members can join in the organized hunts if they wish.

In three days of deer hunting on the ridge between Cedar Run Road and Nittany Valley Road, during 1956 the club killed five bucks. On the first of the deer season's hunts there were 26 members in the party, on the second hunt 43, and on the third and final deer hunt 59.

Fifty-four men signed up for the 1956 bear hunt and, although three hunters had shooting, no bear were killed.

Weapons for the fox hunts are restricted to shotguns with charges no larger than No. 2 shot. Hunters are required to have their current hunting licenses. Bounties of all foxes killed are divided equally among owners of participating fox hounds, this prevailing regardless of circumstances of the kills.

The busy secretary of the Virginia Hunt Club is J. A. Painter, a member of the faculty of Lock Haven

High School, who sends out postal card notices to members prior to each hunt.

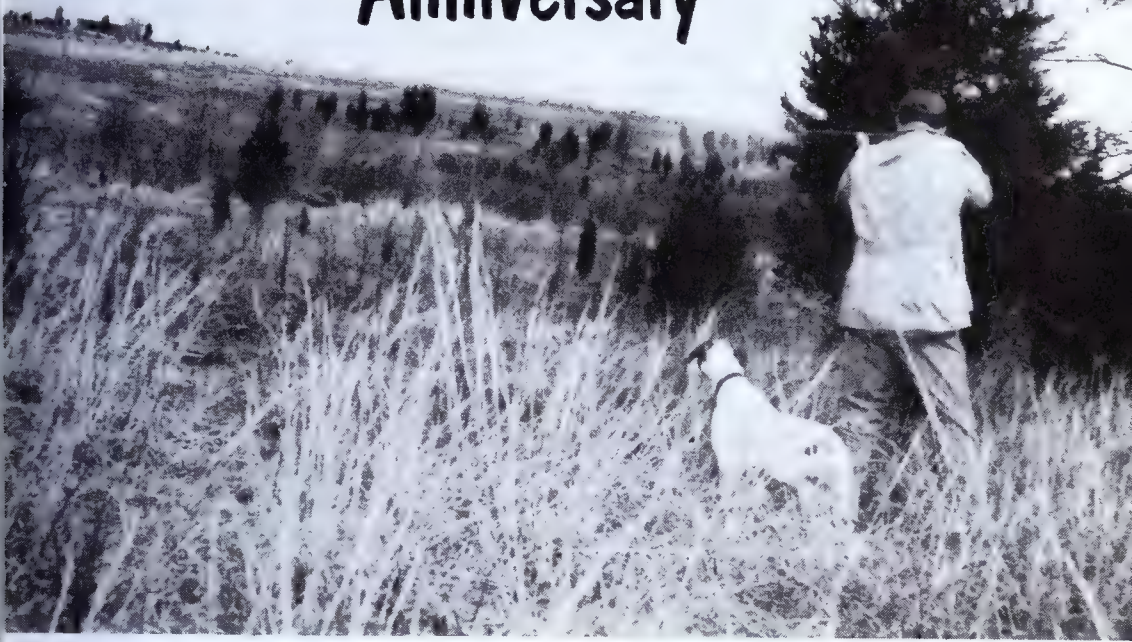
In adjoining Centre County, too, fox hunting is popular with rural dwellers, the best hunting territory being the ridges north of Bald Eagle Valley and wooded areas of Penns and Brush Valleys.

Unlike the Mackeyville territory, where virtually all foxes killed are of the red variety, Centre County fox hunters get both red and gray foxes.

ON WATCH a hunter and his dog stand ready for the sight of a fox.



Fee Shooting's Twentieth Anniversary



By John Sullivan

Deputy Attorney General of Pennsylvania

WE moved along the pleasant little valley while the dog worked busily ahead of us. Within minutes he was at point. That high moment of the bird hunter's day was upon us. Then the quick flurry of wings, the gun's glint on shining feathers, and the sharp report that brought the quarry tumbling to earth.

A clean kill. And in less than an hour three more. Each with its own element of sharp excitement, each with its challenge of a different flight path, each with its pitting of speed and wild cunning against the gunner's eye and judgment.

In these elements, except for the unusual quantity of game, our morning's venture represented a reasonably normal situation, even to the gunner's boast that none got away. But it was different, much different.

Because of a pen put to paper twenty years ago, it had other aspects

far removed from the pattern of any Pennsylvania hunter's normal day.

For one, the dried grass beneath our feet was held in a brittle crust of frozen sod. The bracing wind that blew steadily down the valley was sharp with the icy tinge of February, not November. It was out of season.

Equally significant, the bag was not the two birds allowed in November, but four.

And finally, to cut short the chronicle of the unusual, they included hen pheasants as well as cocks.

Why does the Pennsylvania Game Commission let anyone get away with something like that? Shooting out of season. Exceeding bag limit. Killing female pheasants.

For the answer to that question we have to go back twenty years. Back to June 3, 1937, to be exact. On that date the Governor of Pennsylvania, sitting in the ornate Executive cham-

bers in the State Capitol, affixed his signature to the new Game Code.

That code, consolidating and modernizing a number of scattered statutes relating to game, also contained many features new to Pennsylvania. It was so modern, so thoroughly drafted, that it has stood with only minor changes since that time. For that much credit goes to one of the Commonwealth's greatest sportsmen and conservationists, the late Grover C. Ladner. Destined to become a Justice of the Supreme Court of Pennsylvania, he was then a Deputy Attorney General. Not least of his contributions to his State was the Game Code.

One of the new features of that Code was a provision legalizing and establishing the ground rules for the operation of regulated shooting grounds.

The idea was not new. New York had pioneered in 1910, twenty-seven years before. Some other States had followed. But the idea did not spread too widely or rapidly. Some experience was gained, but there were still many problems to be solved when Pennsylvania undertook the experiment in 1937. Many sportsmen doubted that the movement would ever get off the ground. Others took an even more pessimistic view that it would spell the end of public hunting, that it would open an era of commercialism which would leave nothing of man's most ancient sport but happy memories haunted by the reverberations from admission-charging shooting galleries.

Perhaps it will be worth while, after twenty years, to observe this anniversary of the regulated shooting ground in Pennsylvania by taking a good look to see what has actually happened.

My own limited experience may give at least a partial answer. Like many other professional men, I have few opportunities to get out into the open for hunting and fishing. A dedi-

cated sportsman, with time and fund available, will follow his quarry into the far places whenever his whim and the open seasons coincide. Days or even weeks away from the home fire side do not concern him. It is a pleasant way of life, and has much to recommend it, but not for those millions whose duties bind them close to the farm, the shop, or the office. Even an overnight trip for upland game is an expedition, requiring thought and advance planning. So it becomes necessary for the occasional hunter, who must sandwich in his favorite sport between his hours of labor, to find a quickie substitute in this jet-propelled age. It is this, I suspect, which has been the dominant factor in the development of regulated shooting grounds.

It is that element of availability which counts high with the hurried and harried Nimrod. If he can get in his shooting by snatching two or three hours from his other work, he will do it. I have a feeling that with many that may be the only shooting they get, even though they buy a license year after year with firm determination to get maximum value from it.

It is true that some hunters will come long distances, particularly if good accommodations are available or other attractions draw them to the vicinity, but the basic custom of Pennsylvania's regulated shooting grounds appears to be the one-day or even half-day trade. Those which can provide adequate facilities within easy distance of metropolitan areas would seem to be in the best position to meet the need, although turnpikes and four lane highways have greatly extended the range of the city gunner.

One of the factors in the success or failure of an establishment, it would seem to me, is the purely social one. The man who pays twenty dollars for a day's enjoyment in the field, plus

travel and other costs, is not exchanging dollars for pounds of flesh on a *avoirdupois* scale. Nor is he seeking only the ancient thrill of the chase, important as that is to his enjoyment. There is yet the third factor, that keeps him at it even when the birds just won't fly, or his shotgun unaccountably keeps missing easy shots. That final element is his own gregariousness. He is an enthusiast, a hobbyist. A large measure of his enjoyment comes from the easy and friendly sociability of all men who have a hobby in common. This is where the personality of the man who operates a regulated shooting ground is important.

First and most important is Mine Host, a friendly man who unobtrusively eases the way to enjoyment, the man who has thought of everything, the man who has everything ready and available. He is genuinely glad to see you, and in the warmth of that

atmosphere the hunter relaxes. Even before he has changed his clothes, he has entered into another world, a world of guns and dogs and men who share the comradeship of the open. Even if briefly, the clamors of the outside world are shut out.

The gathering place may be called a clubhouse for want of a better name, but there is about it none of the sleekness of the golf club. At one preserve it is part of the garage, and comprises office and incubator areas with dressing space. At another it is a rustic-finished basement area enriched by a glowing open fireplace. One may expect to find it, in almost every instance, unpretentious and utilitarian, redolent of shotguns and hunting gear, a casual way station where hunters may congregate without too many civilized elaborations of decor to disturb their communion with the things of nature. It may be a partitioned-off part of an old barn.

EVENING SHADOWS mark end of a hunter's day. Dominant factor in development of regulated shooting grounds has been their promise of the most shooting in the least amount of time.





HEN PHEASANTS, given full protection by law on open land, are legal game on regulated shooting grounds. All pheasants, chukar partridge, quail, black and mallard ducks removed from these grounds must be tagged.

Almost any place will do that is light, warm, and reasonably removed from the refinements the hunter is fleeing when he takes to the field.

Of course the birds will be there. Pheasants, mostly. Mallards in an increasing number of establishments. Some chukars and quail. Are they tame and pale imitations of their wilder counterparts? Let the wiser and more experienced give the final word on that, if indeed there ever is a final word. It is perhaps permitted for a mere amateur to suggest that the birds themselves are no different from those the Game Commission itself stocks for public hunting. Which leads us to the thought that the difference is in the method of release. The operator may throw the live bird into the mouths of the surrounding canons, or he may stock it so far in advance of the gunning that it disappears, either over the hill or into the maw of some predator. Between those extremes will be found all manner of hunting, and it is safe to venture that the kind the hunter will get is the kind he most wants. If he wants

difficult shooting he will be able to find it. If he demands easy prey that also will be available to him. In the light of this fact, this tailoring of the situation to the requirements, it is questionable whether the controversy has more than academic status. Not that it need thereby be dismissed, for it is of such learned discourse that tall tales are made and proceedings of sportsmen's clubs enriched during the shut-in months.

It is of these three things, then, the man and the shelter and the birds, that the regulated shooting ground is made. We say nothing of the dogs, vital as they are, because they are an optional feature. Some operators provide them, some do not. Some hunters bring them, some shoot without. The same is true of that other helpful little feature—the cleaning of the game. Some do it, some do not.

Differing in small details but essentially the same in the type of sport they afford, regulated shooting grounds have to come to stay in Pennsylvania. They are not, as some

thought when they were first legalized, a flash in the pan. They are in operation now not only in Pennsylvania but in twenty-six other States. On the other hand, the statistics give little support to those who feared their development as spelling the end of public hunting. After ten years of legal operation, 21 were licensed for the 1946-47 hunting season. Although that number had increased to 103 for the 1956-57 season, only 29 of those were public shooting grounds. The others were licenses for clubs or individuals. Since the minimum acreage for a public area is 100 acres, even an estimated average of 200 acres per establishment would account for less than 6,000 acres in all of Pennsylvania. Hardly a large slice of the State's hunting lands.

The intensity of utilization of public regulated shooting grounds may be estimated from the fact that last year the operators used 109,375 of the tags which are required to be placed on every killed bird before it leaves the premises. Since only about 20 of the licensed public areas were in full

commercial operation, this means about 5,000 birds per establishment. This does not give a complete picture, as some of the larger establishments accounted last year for more than 15,000 birds each.

The tag total represents at maximum only 75 percent of the birds released, since the law requires four birds to be released for every three shot. In practice operators estimate that a sixty percent recovery is average, and anything above 70 percent exceptional. Some beginners are lucky if they get back fifty percent. Assuming a State-wide average recovery of 60 percent, this would mean that the total release last year was more than 180,000 of which some 70,000 escaped. How many wandered into public hunting areas and helped to increase the regular bag of Pennsylvania's hunters is a question. It could be a substantail figure. Certainly it should exceed considerably the number of "wild" birds that might gravitate to a regulated shooting ground and fall under the guns there. These things,

MALLARD DUCKS are becoming increasingly popular on regulated shooting grounds. Released from a flight tower or other high point, they wing their way towards rearing ponds to offer fast and tricky pass shooting.

Photo by Don Heintselman



again, are food for speculation and learned discourse when good fellows get together.

A quick glance at the economics of regulated shooting grounds would indicate that the danger of over-commercialization is something short of clear and present. Those who have worked in this field estimate that the operator's gross profit after paying the cost of buying or raising his birds is one dollar per bird shot. Considering the capital expense of plant and equipment, together with the cost of merchandising, management and operation, even the exceptional 15,000 bird operation is something short of a gold mine. It is hardly the type of enterprise to attract stock speculators. Actually, it appears to be most successful in those situations where it can be combined agreeably with other pursuits, such as farming. Some who have their own incubators, and even mature birds to clubs which use them for rearing and stocking, sell day-old pheasant chicks. There appears to be a growing trade with restaurants in table pheasants. One way or the other, there are means of combining other operations with the short season when the ground is in operation. The word short is used in terms of maximum possible utilization, because it is likely that these commercial operations would be able to put themselves on a more efficient basis if they were not perforce shut down several months of the year. However, even if they were on a full-time schedule they would hardly constitute a serious threat to general public hunting. They are a special purpose activity, and they appear to be filling a special need effectively.

Any development they may have in the future will be likely to come not through their crowding out of public hunting, but through their flow into a vacuum created by the diminishing of public hunting opportunities. How great that vacuum may

become depends upon several factors, the most important being the increased leisure of the American family in the new technology and the industrial or commercial invasion of lands now given over to wildlife. The regulated shooting ground, as it now exists, represents a compromise with increasingly grimmer realities. So long as a substantial portion of field and woodland remains open to the man who buys a hunting license, this non-fee competition will probably prevent the regulated shooting ground from being more than a marginal or part-time operation, or in any event will prevent it from developing profit capabilities which would attract high-finance exploitation. What would happen if the march of progress were to continue dooming wildlife habitat, or at what point the public pressure for recreation would countervail against the pressure of commerce, remains to be seen.

At the moment the public recreational need is manifesting itself in an increase in dollar values of wildlife assets, with the prospect that even without consideration of the intangible factors there could come a time when an acre of land would have as great a dollar value for recreation as it would have for industry. Such a development would, of course, put a much higher price tag on all kinds of recreation, whether on public lands or operated by private enterprise. In such a situation it would not be surprising to see the regulated public shooting ground take on a new economic importance, but the time is not yet. As of now it is simply another kind of part-time farming, threatening no one and filling a manifest need. The operation of a regulated shooting grounds has its compensations, but most of them are not in cash. Those who gravitate into the field seem to do so because they like it, not because they have any hope of getting rich out of it.



FIELD NOTES



If At First . . .

SUSQUEHANNA COUNTY—Many tales of unusual experiences came about as a result of the past archery season, the first in which any size or sex of deer be taken. Most every archer was confident that he would at least get a doe if no large racked deer was handy but now that the season is closed all will agree that hunting with a bow is not as easy as it would appear. Some went so far as to say the deer would stand and look directly at the arrow as if to determine its path of flight then neatly sidestep and let the shaft speed by. But Gus Jicka of New Milford feels he was almost insulted by a deer. Gus wasn't long in finding a target as season opened, in fact a doe stood in an orchard and permitted him to fire 6 shots and did not run even then. Gus only had six arrows so he edged up and retrieved them all. Again he shot all six and the deer would only shy as the arrows flew by. Gus said he was going back to his rifle.—District Game Protector Donald G. Day, Susquehanna.

Ignorance Is Still No Excuse

CHESTER COUNTY—On October 26, 1957, assisted by my deputies I held a car checking station in my district to determine the amount of game killed and an approximate idea of the number of hunters hunting and the species of game, and of course for possible infractions of the law. As is the usual case we had to arrest several for loaded guns in vehicles, which we get every year. But the sad and discouraging part is the so-called hunter who never bothers reading his license, reading any newspaper or listening to the radio, yet on the opening of the season he will come through the checking station with song birds, birds of a closed season such as doves and other migratory birds, yet swears he never read or heard about this law or that law. The only way to convince this type of hunter to read or check game laws is to educate him through his wallet. Usually they don't take that careless attitude in the future.—District Game Protector Edward J. Fasching, Downingtown.

I. Q. Quail

LEBANON COUNTY—John Ditzler, garageman who lives along heavily traveled highway route No. 72 says that this past summer he saw a bobwhite quail walk to the cement paving of the highway, look up and down the highway until several automobiles passed and until it was safe to cross, then walked across the highway in safety.—District Game Protector Elmer J. Turner, Mt. Gretna.





Trap Gun

FULTON COUNTY—Fish Warden Carnell and I were checking two hunters. One carried a fine old trap gun of yesteryear, upon which I commented:

"Fine old trap gun you have."

"What the heck you mean, Crap Gun?"

"No! No! TRAP GUN."

"Cheeses Mac! You can't shoot nutting in a trap with no gun like that; blow it all to pieces."—District Game Protector Carl E. Jarrett, McConnellsburg.

Not So Blind

YORK COUNTY—Fish Warden Martin and I were patrolling the River below Wrightsville the first day of duck season when our attention centered on an old car body which appeared to be just some more debris. Closer inspection revealed it to be a camouflaged car body in a barge, used as a duck blind. Windows were painted to eliminate any glare. I don't know how effective this blind is, but it must have more comfort than the average blind.—District Game Protector Daniel H. Fackler, Windsor.

Delayed Turkey

HUNTINGDON COUNTY—On October 29 I was informed by Leonard Hess that he and Charles Grove, both of Hesston had flushed a hen turkey that was nesting in a jack pine thicket along Tussey Mt. the first day of the woodland small game season. At the time of the intrusion there were 11 eggs in the nest. Within 2 days all the eggs had been destroyed by a ground predator and the hen was not to be found. (To my knowledge and the witnesses no one had killed the hen.) I examined the site Oct. 30 and the nest with fragments of feathers and egg shells were still present, although not satisfactory enough for a picture. I assume this is just one more of Mother Nature's unorthodox events.—District Game Protector Richard D. Furry, Huntingdon.

Ruined Bruin

ELK COUNTY—Occasionally a wild bear gets to liking civilized ways, but not being able to understand the human way of living, gets himself into a peck of trouble.

This particular bear spread destruction and havoc around the locality of Toby Valley for several weeks during October. He was first noticed by a resident of that area while he was up a tree near their home. Game Protector Milford was summoned and with the use of some loud firecrackers, chased Mr. Bear back to the woods. Several days later, evidently still brooding over the unsociable actions of the humans he went through another property owner's yard and several feet from the house picked up a duck in his jaws and gave it a fling. One dead duck and a bear damage claim. A week or so later he was seen rampaging around in a chicken yard near several houses; playing children were hurried into their homes by parents while the bear was being chased away. He returned in a few minutes and was chased away again.

From these residences, he went to the top of the hill to another residence and there decided to try some fresh pork. The son of the man that owned the pig heard the squealing and came out to see the bear in the act of trying to dismember the pig. He ran into the house and got a rifle and came out just as the bear was trying to get the pig out of the pen. One shot from his rifle stopped the hair raising escapades of this bear and it can be certain that a lot of children and parents are resting easier now that the terror is not around anymore. The boy that shot the bear had to go to the Doctor the next morning because he was suffering from nervous strain.—District Game Protector Fred Servey, St. Marys.

Black And White And Brown All Over

WAYNE COUNTY—Although partial albino deer are not too much of a rarity anymore, the deer I observed in Lebanon Township this October is unusually marked. This deer has the usual white coat with patches of color on the feet, flank, back and ears. But the usual brown patches are jet black on this particular deer giving it the appearance of a Holstein heifer.—District Game Protector Fredrick G. Weigelt, Honesdale.



Once A Retriever . . .

FAYETTE COUNTY—On October 15th, first day of the 1957 waterfowl season, Deputy Miller of Mill Run related this story by phone. Seems as though a duck hunter (who did not want his name used) killed a mallard duck that dropped a distance out into Indian Creek Reservoir. The hunter after some time got impatient and said there was little chance of the waves washing the duck to shore. Furthermore, he said that he has retrieved every piece of game he has ever killed. Moments later, he was off for a swim in his under-clothes. He made his retrieve, got in his car and drove off with his wife who watched the entire affair from the car.—District Game Protector Alex J. Ziros Connellsville.

More Costly Than January Watermellon

ADAMS COUNTY—While patrolling for pre-season hunting during the early part of October, this officer apprehended an individual who was shooting squirrels in the closed season. When apprehended and asked why he was out shooting squirrels prior to the season, the defendant stated that "my wife is six-months pregnant and she has a craving for stewed squirrel—it just seems that there is no other kind of food that will satisfy her except the squirrel." After paying the fine, defendant stated that his wife "would just have to learn to do without squirrel until the season comes in."—District Game Protector Paul H. Glenny, Gettysburg.



Bring 'Em Back Alive

NORTHUMBERLAND COUNTY—Two rather amusing incidents happened within 15 minutes of each other on a checking station the first day of the season. We had stopped a car and I happened to look in the back seat and saw a cock bird quite lively. I told the men who were outside the car about it. They had some time easing the door open and catching and killing the bird. Then another car was stopped and I walked back to check the trunk which they had opened. I looked in and said to the young man, "That one rabbit is alive." He looked at me in disbelief; I repeated my statement. He grabbed for the rabbit and it jumped through the hands of the young man, between the legs of a couple of others and dashed up through the woods with the young man in hot pursuit. He managed to catch it in a couple of minutes, but there sure was a lot of kidding going on.—District Game Protector Cylde E. Laubach Elysburg.

False Fears

BERKS COUNTY—On October 26th, a hunter, hunting for the first day in his life, had the misfortune to encounter a badly frightened deer in Exeter Township. The deer was confused by several groups of hunters converging on it and ran toward this hunter. Its actions resulted in a badly frightened hunter who feared for his

life and finally shot the deer. It was a small doe which could have caused hardly any material injury to anyone. The man's companions, who should have been along with him were inhaling some anti-freeze in a nearby hotel. The moral: "Don't hunt with those who would rather drink than hunt."—District Game Protector Joseph A. Leiendecker, Reading.

Sly As A Fox?

ADAMS COUNTY—The following was told to me by Ross B. Taylor. Last December, during the muskrat trapping season, his brother, Dwight, went out to check his muskrat traps at 10:30 p.m. just before retiring. As he was strolling up through the meadow armed only with a flashlight, he heard something rushing through the dead grass and weeds heading in his direction. His first thought was a muskrat out in the field heading for cover. His next impulse was to spot and kill it. But as he played the light around, a cottontail rabbit shot past him and disappeared in a groundhog hole just about ten feet in front of him. Almost in the same split second, he realized there was still something coming and sure enough, right on the heels of Mr. Rabbit was what he described as the biggest Red Fox he has ever seen. The fox dashed right up to the hole and looked down. He then turned his head and stared into the beam of light, then back to the hole again and then to the light. After a few seconds of looking this way and that, Mr. Fox dropped down to a sitting position, licked his chops, yawned and fixed his gaze on the hole as though he intended to wait for his supper. At this point Dwight said he realized there were a few "goose pimples" creeping up the back of his neck so he stamped his feet and yelled, "Boo!" The fox turned his head to take one last look into the beam of light and then trotted casually off through the meadow.—Conservation Education Assistant Earl Geesaman, Reading.

Balance Of Nature

TIOGA COUNTY—Wildlife has a method of balancing itself according to authorities and this point was demonstrated recently while releasing pheasants. I had just turned a number of cock pheasants loose in a local cover, when one of them was attacked by a red-shouldered hawk. The hawk failed to kill the bird on his first pass and as he turned to make another drive, he, also, was attacked by a number of crows, driving him away from the bird. Meanwhile, the pheasant escaped unharmed, except for a few ruffled feathers.—District Game Protector James A. Osman, Mansfield.

Lost And Found

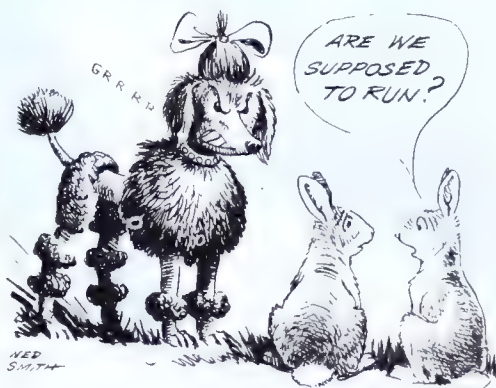
POTTER COUNTY—On October 2, 1957, I found a stolen jeep fire truck, hidden on an old logging road on S.G.L. No. 204. This vehicle had been stolen from the Federal Pen at Lewisburg, Penna., by escaping convicts about July 1, and evidently had been hidden there since shortly after their escape. The vehicle appeared to be in good shape but was out of gas. I immediately reported my find to the State Police, who in turn contacted the prison authorities. Federal Warden Blackwell recovered the vehicle on October 3, 1957.—District Game Protector Rozell A. Stidd, Coudersport.

Too Many Rabbits?

COLUMBIA COUNTY—Hunters are funny people. We frequently hear some man gripe that game is scarce, maybe because he couldn't find anywhere he was hunting. A hunter came to me the other day and said, "How in h --- am I going to hunt for the rest of the season. There are just too many rabbits. I've only hunted three days and in about two hours I get the limit and have to hunt something else or go home. H --- of a note."—District Game Protector Mark L. Hagenbuch, Bloomsburg.

It Takes All Kinds

BUCKS COUNTY—On the opening day of small game season a Game Protector is prepared for almost any sight imaginable, and is seldom disappointed. Hunters turn out for the first shot in every type of regalia from the finest sporting togs to bib-type overalls. Their weapons range from handsomely engraved, superposed barrelled and ventilated rib sighted automatics to great grandad's Damascus hammer gun. Some pull up to their favorite coverts in shiny new "Cad-dies," while others ride Shank's mare. They all have one thing in common—they are out for the time of their lives on one of Pennsylvania's big days. The hunter who gave us the biggest thrill was seen walking the streets of Doylestown just two hours after the first shot sounded. This hunter was wearing rugged hunting clothes and was carrying his trusty gun across his arm. He was an imposing sight indeed, that is until one looked at his faithful hunting companion. Walking at his nimrod's side and straining at a delicate leash attached to a rhinestone studded collar was a dainty French poodle, his curls clipped in the latest fashion and wearing a bright red ribbon in his top knot.—District Game Protector William J. Lockett, Doylestown.







Black Bear Bonanza

By Eldy E. Johnston

THE setting for this story is a "draw-hollow," a name frequently applied to any oversized gully, that branches off a larger hollow, or a canyon. Our particular spot is typical mountain terrain, rocky, steep and sparsely timbered, but now, here is the oddity; for a period of eleven consecutive years, a black bear was shot, or shot at, in this draw, several

of the bruins being felled on almost identical locations. Where is this "happy-hunting-grounds?" C a n a d a? Perhaps Maine? No, nowhere else but the Sinnemahoning section of Cameron County, Pennsylvania, one of the nation's leading industrial states but still the scene of an excellent and abundant variety of both large and small game hunting.

It took a long time to wheedle all the details from the only man who could provide them. John "Kaiser" Wilhelm of Irwin, Westmoreland County, but finally I got the story that I knew was there. Incidentally, "Kai" is well known in this part of the state as an all-around woodsman, hunter and marksman, proficient with guns and the bow and arrow. In fact, "Kai" has been an archer-deer hunter since the bow was legalized in this state, in 1929.

Well, to get on with the "bear facts," the season of 1942 found a trio of expectant, but inexperienced bear-hunters, "Kai," Roy and Dan, traveling to Montours Mountain in a convertible coupe, arriving in Cameron County in the midst of a snow-storm. Undaunted, they drove to the top of the ridge as the snow fell harder, making visibility poor and windshield-wipers useless. Finally, as enthusiasm cooled along with the weather, the three hunters were forced by the elements to retreat back down the mountain to their headquarters at Bailey's, the first day's bear hunt a decided flop. That evening, Roy and Dan went to visit the nearby town, while "Kai" stayed behind to talk to an old-timer by the name of Pitts, who had quite a reputation as a successful bear hunter. The old fellow had an appreciative and attentive one-man audience, and before the discussion was over, he told the young hunter where to go for his bear on the morrow. "Go up this big hollow," said Pitts, "till you come to the third draw, climb up the slope about three-fourths of the way up, and wait for your bear." Just like that.

Early the next morning found the trio all enthused again, as they made their way to the location furnished by the old bear-hunter. "Kai" laboriously climbed above his buddies until he reached deep snow, which he decided was as good a reason as any to post himself on watch. Roy and

Dan were out of sight, farther down the slope. It was only a matter of minutes until the hunter was thrilled to see his intended quarry ambling in his direction, but the bear would pass below him. Quickly but quietly, "Kai" angled down the steep slope to intercept the bruin, a good sized shiney-black specimen. Seeing a favorable opening in the timber, the hunter dropped to one knee, and touched off his old 30-40 Krag. As the gun cracked, the slowly moving animal suddenly became as jet-propelled, rolling, tumbling and crashing, down the mountainside. Of course, "Kai" followed as fast as he could, firing at the black blur at every opportunity. Reaching the bottom of the hollow, the bear made a feeble attempt to start up the opposite slope, then rolled over dead. The reason was obvious, of the five shots fired at him, one had cut the heart and two others had struck the vital spine area. The long weary drag back to the car was incidental; "Kai" had his first bear.

The following season, Kaiser travelled to the same area with a friend named Harry and son Howard, boarding again at Bailey's. The first day they hunted the draw with no success, the second day they spent the morning in Whycoff Run, then decided to go back to the draw to finish out the day. As "Kai" worked his way up towards his "lucky spot" of the previous season, he met a party of eight hunters barging down the slope, which dampened his spirits and hopes somewhat, but he kept climbing until he reached his intended destination. Breathing hard, "Kai" turned around, and there stood a large bear, appearing out of nowhere.

To say the hunter was startled was putting it mildly, but he was not so surprised that he didn't know what to do. The 30-40 cracked once and the bear crumpled in its tracks, almost on the spot where his kins-

man had the misfortune to meet Wilhelm the previous season. Examination disclosed that the slug had struck the bruin between the ears and penetrated downward through the neck and into the shoulder, accounting for the "instant kill."

The third year, 1944, found Wilhelm and his brother-in-law Dick, checking in at Baileys, with the express purpose of making it three bear in a row, in the draw which had become a "happy-hunting-ground" for Kaiser. Climbing the slope, "Kai" stopped to show Dick the spot where he had shot bear number one, and as they turned to continue up the trail, there, shuffling towards them was a beautiful specimen of bearhood. Kai whispered "He's all yours, but take your time and let him get closer." After what seemed an age, the ambling bruin suddenly appeared from behind a large boulder, obviously unconscious of any human presence, and obligingly posed broadside, a perfect target. "Now!" said "Kai" and Dick touched off his shot. With the blast of the .270 in the hands of an expert rifleman, such as Dick, at a stationary target, 45 paces away, nothing remained but for the bear to topple over, a corpse. Only the bear didn't topple. Instead he took off down the mountain, as only a startled bear can. "Kai" threw three quick shots after the fleeing animal, but did nothing more than to increase its speed of disappearance. After making certain that the bear had escaped cleanly without injury, the two puzzled and disappointed hunters examined the scene of action, and found a branch about an inch thick that was in the path of Dick's bullet, and apparently had caused the slug to blow up before reaching its intended target.

The bear season of 1945 came around, and you can just about guess where "Kai" Wilhelm and a friend named "Wink" were to be found on opening day. Posting his

BLACK
BEAR
TRACKS

friend near the site of their former encounters with Mr. Bear, "Kai" worked his way up the ridge, to scout around a bit and look for fresh sign in the wet snow. As the uneventful hours passed, the sun warmed the mountain slope, and as "Kai" descended the trail and rounded the turn, he spotted his hunting buddy taking a siesta. "Wink" awoke with a start as his companion approached, and as he scrambled to his feet, he dislodged several stones which started to roll down the mountain side with a clatter. At the sound, a bear tore out of concealment, just four yards below the now thoroughly awakened "Wink," and disappeared within the protection of the rocky confines of the draw, before a gun could be raised. Tracking the bear, the hunters discovered to their further chagrin, that the tracks led within a few yards of the rock that "Wink" had intended to have been on, but wasn't.

The fall of 1946, and you know who was where and why, this time accompanied by "Wink" again, and another friend, Gene. Separating, the trio slowly negotiated the length of

the draw, meeting at the top, several hours later. As they squatted on a huge boulder, along the trail, "Kai" was whispering to his companions just how and where he had shot his bear, when Gene suddenly leaped to his feet, without uttering a word. He threw up his rifle and squeezed the trigger, but the only sound was an ominous "click," as the hammer fell on an empty chamber. By this time, "Kai" and "Wink" had just discovered the reason for Gene's actions, a large bear, looking at them, not twenty-five yards away. Gene levered another cartridge into the chamber, and "Wink" did likewise, his chamber had been empty also. "Kai" had left the shooting to his pals, but as the bear headed for parts unknown, obviously unharmed, he hurried a shot after it, to no avail. It turned out that the empty rifle chambers had been a suggestion by the safety-conscious "Wink," who reasoned that climbing a steep mountainside with a loaded gun, could be dangerous, in case of a fall.

Next season, "Kai" was back at the old stand, this time accompanied by a local chiropractor. Two days of hard-hunting followed, and although "Kai" and his companion didn't get a shot, another hunter did, to keep the record alive, a bear in the draw each year.

The year, 1948, the second day of the bear season, and one of the hunters staying at Baileys, missed his bear at the old location, the bear still frequented the draw.

The next season, "Kai" and two friends, Ed and Art, again tackled

the hollow. Ed was walking on the trail at the crest of the ridge, when a bear came running towards him, heading for the draw. Caught with his rifle slung over his shoulder, Ed barely had time for one snapshot, and missed.

The draw gave up another bear in 1950, but not to one of Wilhelm's party. Probably by now, one wonders why "Kai" doesn't just go up into the head of his familiar draw and wait out his bear. In "Kai's" own words, he just can't stay set too long, and the terrain of the draw restricts the vision to a small area. He prefers to move around, adding that he was moving when he shot both of his bear.

Nineteen fifty-one, bear season in the Keystone state, and Art, Ed and the persistant Wilhelm again hunt their favorite spot. This time it was Ed again who missed his bear on the flat above the draw, getting only one shot.

By this time, the annual trip to Baileys on Whycoff Run had become a habit, a very pleasant and memorable habit, for Wilhelm and his friends. So, in 1952, "Kai" and Art again scoured the ever-popular hollow for two days without success. On the second day, another hunter got his bear in the same old reliable draw, a total of eleven chances in as many years.

Coincidence? Perhaps, but we can't help but believe that the bear that frequent the draw hollow, haven't heard the last of John "Kaiser" Wilhelm and his friends.





SUSQUEHANNA COUNTY FIELD DAY FOR SPORTSMEN AND FARMERS was planned by, left to right, DeWitt Smith, Federation secretary; Linus Moore, Field Day Chairman; and Warren W. Singer, Federation President. They had full cooperation and help of many committees and 14 member clubs.

For Fun and Gain

By Frank Stout

IT started four years ago as a modest project to bring farmers, their families and sportsmen together for a day of trap shooting, fun and eating. The goal was to improve relations between farmers, hunters and fishermen.

After four years, the Susquehanna County Federation of Sportsmen's Clubs looked back on its annual Autumn field day and counted these blessings:

- (1) The amazing total of 18,000 persons had attended the four field days.
- (2) An astonishing mountain of nearly 10,000 chicken barbecue dinners had been eaten.

Behind these statistics and gastronomy, however, are much broader gains for conservation in general,

farmers and sportsmen in particular.

The field day was the brain child of the Susquehanna County Federation's officers who felt that something needed to be done to show everyone in the county that sportsmen were something more than hunters and fishermen, interested only in a full bag or creel.

How does it work? Let's take the 1957 field day at Harford Fair Grounds as an example, then look at some of the dividends it has paid sportsmen and farmers.

Despite continuous rain the night before and intermittent rain until noon of the day of the 1957 event, 6,000 persons crowded the fair grounds for the field day. A conservative estimate placed the crowd at better than 10,000 if the weather had



HORSE SHOW was unique attraction at the 1957 Field Day. Here a small segment of the 6,000 visitors watches as local riders put their horses through the paces. Event was big attraction to women and children present while sportsmen husbands and fathers were enjoying shooting activities.

co-operated. But the 6,000 who did attend saw four traps in almost continuous operation; two truckloads of ammunition and claybirds went up in smoke and dust; a horse show staged by an amateur group; a coon drag; an archery demonstration; exhibits by the Game and Fish Commissions; a rifle marksmanship exhibition, a turkey shoot and an "old-time" trap shoot staged by Scranton gun enthusiasts with black powder loads in 10-gauge shotguns.

When they weren't seeing these things, which ran continuously and simultaneously, they ate 3,000 chicken barbecue dinners and enjoyed snacks at four refreshment booths.

Behind this one-day were months of planning by 14 Susquehanna County member clubs who each were delegated a specific task—several on the trap range; others in refreshment booths; another for public address systems; one for the horse show—all had their jobs to do.

Warren W. Singer, Susquehanna County Federation president, and Linus Moore, field day chairman, count these important dividends from the annual field day:

More and more "no trespassing" signs are coming down in Susquehanna County while more Game Commission-sponsored "safety zone" signs are going up. Singer and Moore attribute this to the fact that farmers and sportsmen meet at the field day, share fun, and come to understand one another's desires and problems.

The 14 member clubs, pitched together in this single annual project, learned to share conservation on a county-wide basis. Now each club has at least one project aimed at improving conservation facilities. One club buys chestnut trees and plants them; another plants various kinds of nut trees; another club works at stream improvement and another makes its manpower and facilities available to other community organizations doing welfare work.

Singer says you might just call it "public relations."

With a fifth year coming up, the Susquehanna County Federation would like to see its project become a Northeastern Pennsylvania event so seven other counties could share the fruits of fun and gain.



"OLD TIME" SHOOTING DEMONSTRATION involved black powder guns. Here Jim Varner, right, fires black powder load from 10-gage shotgun while Tom price, in derby, prepares for the next shot. Note puff of smoke from Varners' gun against rainy sky.

RIFLE DEMONSTRATION showed power and accuracy of modern firearms and gave emphasis to safe gun handling. Here Scranton gunsmith Tom Price shows shattered remains of two-gallon oil can pit by high velocity 240 Rockchucker bullet.





CONSERVATION NEWS



Snowshoe Rabbits Fair Game In Last of Hunting Seasons

The snowshoe rabbit (varying hare) season opens Saturday, December 28 and ends Saturday, January 4, 1958. Shooting hours are 7 a.m. to 5 p.m. all days of the season, except for the Sunday when game hunting is unlawful. The daily bag limit is 2; the season limit is 6.

Ground conditions in the rugged northern counties of Pennsylvania, home territory of most of the state's "white rabbits," will be a controlling factor in determining the total bag of this game animal. On snow the winter coat of the hare blends with the white background, offering protection from natural enemies and making the ghostlike animal difficult for hunters to see. However, if there is no snow the dark background will show the hare up sharply, and small hounds will have little difficulty in trailing.

Snowshoe rabbits are not now abundant in Pennsylvania as they were early in this century, when the brush stage forests provided ideal habitat for them. Maturing timberlands and over-browsing by deer have caused a great reduction in the snowshoe population. Nevertheless, many hunters will enjoy the wide-circling chases these big-footed "rabbits" afford during the Holiday Season.

Federal Duck Stamp Sales Register Decline in 1957

Federal "duck stamp" sales in fiscal year 1957 dipped below the previous year's all-time high record, Assistant Secretary of the Interior Ross Leffler has announced. A total of 2,332,014 stamps of the 1956-57 issue was sold to hunters of migratory waterfowl, conservationists and philatelists, according to final figures supplied by the Post Office Department, the agency responsible for distributing and selling the stamps. This is 37,926 less than last year's record total of 2,369,940.

As an indicator of hunting pressure duck stamp sales have been grouped by waterfowl flyways for the past two years. The 1957 total (with 1956 figures in parentheses) are as follows: Atlantic Flyway—378,753 (387,035); Mississippi Flyway—1,022,695 (1,019,145); Central Flyway—491,272 (523,630); and the Pacific Flyway—428,487 (430,597).

New York led the Atlantic Flyway states with a sale of 73,697. Pennsylvania was second with 51,860, followed by Florida (40,862), North Carolina (30,318); and Maryland (28,326). Other states in the Flyway reporting sales of 10,000 or more included: Georgia, Maine, Massachusetts, New Jersey, South Carolina and Virginia.

WINTER FEED FOR WILDLIFE

Seed screenings may be obtainable at low cost per pound, but it is poor policy to use them as winter feed for game birds, a wildlife authority advises.

The buyer pays good money for dirt and chaff, which may constitute $\frac{1}{5}$ to $\frac{1}{4}$ of the mixture, and these do wildlife no good.

Weed seeds make up as much as 25% to 30% of the screenings, tests show. The distribution of them on agricultural land is unfair to the farmer and leads to poor public relations.

Therefore the best game bird food to buy, all things considered, is clear grain. For wildlife, the best all around winter food is yellow corn.

Pennsylvania IWLA Dedicates State Trees in Memory of Grace Beach and Dr. Bennett

Highlighting the Annual Convention, Pennsylvania Division, Izaak Walton League of America, in Lancaster on October 5 and 6 were appropriate ceremonies dedicating two hemlock trees to two outstanding Americans and Pennsylvanians. M. J. Golden, Deputy Executive Director of the Pennsylvania Game Commission, and John M. Haverstick, District Game Protector dedicated one of the specimen hemlocks, typical of the Commonwealth's official tree, to the memory of Dr. Logan J. Bennett, Commission Executive Director who died last September. William Voigt, Executive Director of the Pennsylvania Fish Commission, dedicated the

other hemlock to the memory of Mrs. Grace O. Beach, former Secretary of the State Division and at the time of her death last June, Conservation Director for the IWLA. The Pennsylvania Division donated the tree dedicated to Mrs. Beach while the Red Rose Chapter of Lancaster was responsible for the hemlock dedicated to Dr. Bennett.

Both trees were planted on land owned by J. Earle Pfautz located at Slackwater, about one mile south of Millersville. Following the tree-planting ceremonies the State Division opened their annual convention in Lancaster. Speakers at the Annual Banquet Saturday evening included M. J. Golden, Hon. Paul Dague, Member of Congress, and Hon. Ross Leffler, Assistant Secretary of the Interior.

DEDICATION CEREMONIES during 1957 convention of the Pennsylvania Division, Izaak Walton League of America saw the planting of two specimen hemlock trees in memory of Grace Beach and Dr. Logan J. Bennett. Making dedicatory addresses were, left to right, William Voigt, Jr., Executive Director, Pa. Fish Commission; David B. Bashore, President, Pennsylvania Division, IWLA; and M. J. Golden, Deputy Executive Director, Pa. Game Commission.





H. L. Plasterer



Clarence J. Weaver

Three Veteran Employees Retire From Commission Service

Three longtime Game Commission employees retired from state service as 1957 drew to a close. Two of these men worked in the Harrisburg headquarters while the other served as a District Game Protector.

H. L. "Pat" Plasterer, Bounty Claim Agent in the Commission's Division of Law Enforcement, retired October 31 after almost 35 years of service. He joined the Commission October 23, 1923. His assignments included clerical and field work, trapping instructor, traveling Game Protector, Chief of Predatory Animal Control. He is married and resides in Harrisburg.

Clarence J. Weaver, Supervisor of Service, retired December 1. He started to work for the Commission December 1, 1931. His assignments included Building Assistant, Principal Construction Inspector, Construction Engineer, and Senior Buyer. "Danny" is married and also resides in Harrisburg.

District Game Protector E. M.



E. M. Woodward

Woodward retired January 1 after 36 years of service. He joined the Commission as a Game Protector on August 16, 1932 and at the time of his retirement was serving in Bedford County.



OUTDOOR EDUCATION PROJECT HAS 1ST BIRTHDAY

The Outdoor Education Project of the American Association for Health, Physical Education, and Recreation celebrated its first birthday with an encouraging note about the widespread interest among educators for student training in the outdoor skills of casting and fishing, shooting and firearms handling, boating, camping, and related activities, the Wildlife Management Institute reports.

Sponsored by the AAHPER in cooperation with the Sporting Arms and Ammunition Manufacturers Institute and the Associated Fishing Tackle Manufacturers, the project has three major purposes: (1) leadership training for outdoor education workshops and clinics; (2) interpretation of outdoor education and its implications for school and college programs; and (3) preparation and distribution of instructional materials in outdoor education.

More than 600 high school and college teachers as well as representatives of state education and conservation agencies and associations have attended pilot workshops held in Ohio, Michigan, Utah, Virginia, Wyoming, and New England. Other workshops are scheduled in Georgia, Wisconsin, and West Virginia.

Inquiries are welcomed by the project director, Julian W. Smith, AAHPER, College of Education, Michigan State University, East Lansing.

PENNSYLVANIA OUTDOOR EDUCATION WORKSHOP was held October 9-11 at Blue Knob State Park in Bedford County. A group of teachers, conservation agency personnel and representatives of sporting arms and fishing tackle manufacturers attended to learn how to include outdoor recreation and resource conservation in their teaching programs. Activities included many field trips and practical on-the-ground demonstrations, as shown at right when a group of teachers were conducted on a tour of State Game Lands.



PENNSYLVANIA GAME COMMISSION
RESIDENT AND NON-RESIDENT
HUNTERS' LICENSES ISSUED
BY COUNTY

Counties	Non-Resident		Counties	Non-Resident	
	Resident 1956	Resident 1956		Resident 1956	Resident 1956
		<i>D.V.</i>			
Adams	6,890	(1)	467	Lackawanna	15,471 (19) 286
Allegheny	74,588	(39)	185	Lancaster	29,557 (18) 155
Armstrong	13,213	(7)	217	Lawrence	11,662 (7) 1,523
Beaver	17,187	(9)	340	Lebanon	10,277 (10) 46
Bedford	8,707	(8)	590	Lehigh	15,310 (13) 100
Berks	24,330	(18)	62	Luzerne	28,970 (25) 608
Blair	17,853	(18)	288	Lycoming	17,976 (15) 391
Bradford	9,283	(9)	688	McKean	10,008 (5) 1,496
Bucks	15,974	(12)	848	Mercer	16,615 (9) 2,670
Butler	15,179	(30)	148	Mifflin	8,192 (12) 200
Cambria	23,877	(17)	380	Monroe	6,569 (6) 694
Cameron	1,722	(2)	316	Montgomery	25,438 (12) 87
Carbon	6,438	(12)	123	Montour	2,254 (3) 20
Centre	12,432	(11)	242	Northampton ...	16,806 (11) 811
Chester	15,850	(8)	610	Northumberland .	13,552 (16) 85
Clarion	9,072	(12)	909	Perry	4,914 (5) 50
Clearfield	14,871	(14)	804	Philadelphia	25,284 (11) 727
Clinton	7,812	(13)	201	Pike	1,806 (1) 2,122
Columbia	8,406	(2)	114	Potter	3,693 (7) 839
Crawford	14,368	(15)	1,017	Schuylkill	19,883 (17) 120
Cumberland	15,988	(5)	60	Snyder	4,316 (8) 40
Dauphin	20,638	(31)	163	Somerset	12,944 (16) 487
Delaware	12,436	(13)	189	Sullivan	1,488 (4) 110
Elk	6,590	(3)	475	Susquehanna	5,413 (2) 482
Erie	24,917	(19)	948	Tioga	7,509 (4) 539
Fayette	18,471	(27)	259	Union	3,847 (6) 63
Forest	1,482	(1)	733	Venango	10,107 (8) 1,151
Franklin	12,622	(3)	424	Warren	6,771 (10) 1,298
Fulton	2,258	(11)	212	Washington	21,666 (14) 685
Greene	4,942	(5)	154	Wayne	5,172 (11) 854
Huntingdon	7,711	(12)	258	Westmoreland ...	37,209 (29) 202
Indiana	11,330	(13)	372	Wyoming	2,936 (1) 140
Jefferson	10,569	(19)	693	York	26,313 (7) 626
Juniata	3,475	(4)	97	Dept. of Revenue	1,131 (—) 2,231
				Totals	902,540 (765)* 35,524†

* The figures in parenthesis indicate "Free Licenses" issued to Resident Disabled War Veterans, which are included in column of "Resident Licenses."

† Includes Alien Non-Resident Hunters' Licenses as follows: 1955, 2; 1956, 6.

NEW PUBLICATION ON PENNSYLVANIA HISTORY OFF PRESS

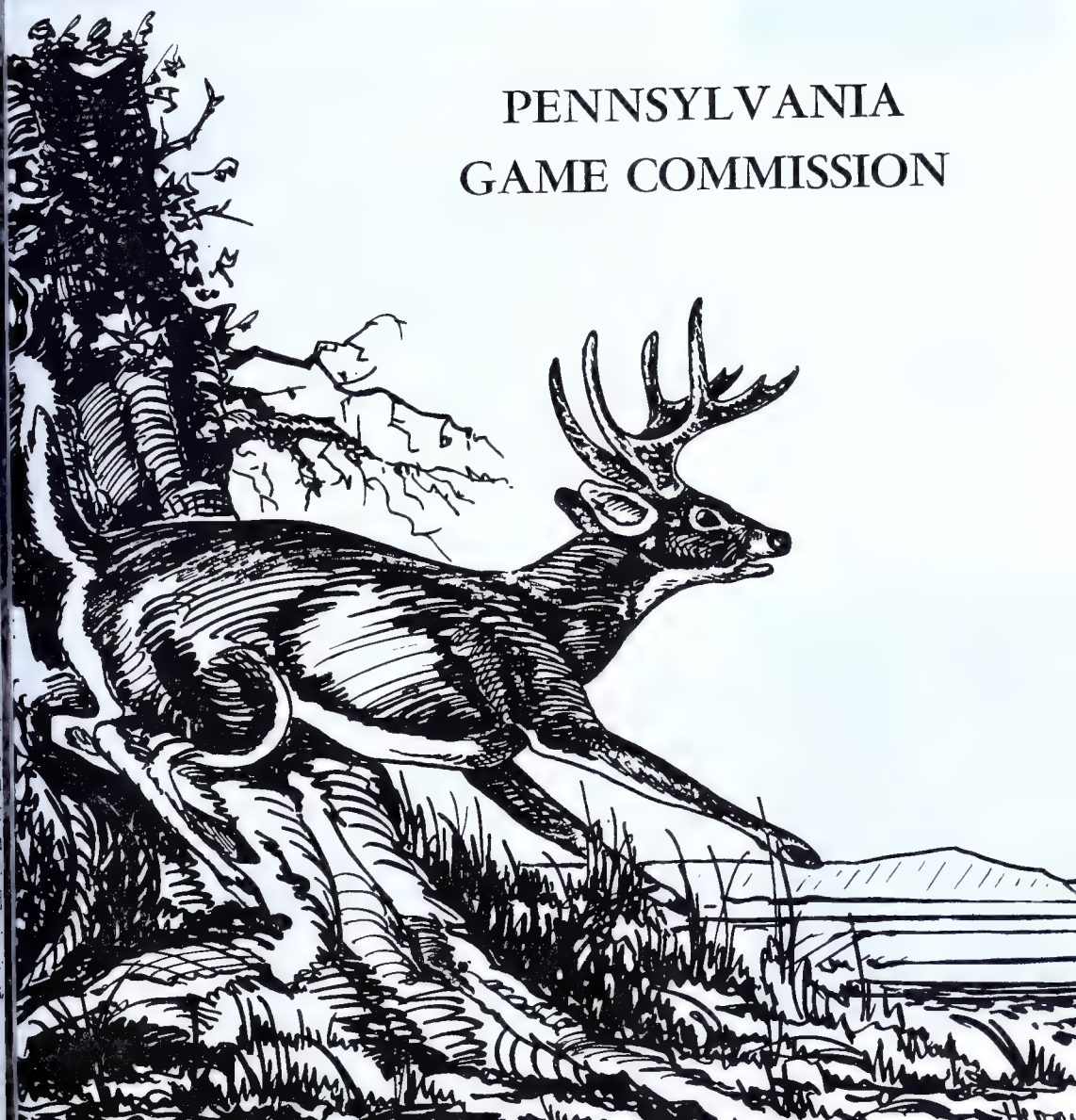
Pennsylvania Publications, creators of "Historic Pennsylvania" and "Scenic Pennsylvania," have just produced their third booklet on the Keystone State. Entitled "Highlighting Pennsylvania's History (Part I)," its 64 pages contain 110 photographs and suitable text portraying the State's history and scenic charm. It describes the Pennsylvania State Museum and eight of the fifteen State Historic Shrines. The story of the Battle of Raymondskill, a Revolutionary War skirmish, is given in detail as are the legends of Winona and Nitane. Eight pages are used to describe the historic attractions at Gettysburg and five pages contain pictures from the Amish country around Lancaster. Copies of the booklet are available at \$.50 each from A. H. Carstens, Director, Pennsylvania Publications, Cresco, Pa.

N HONOR

25 Years

OF FAITHFUL SERVICE

PENNSYLVANIA
GAME COMMISSION



PENNSYLVANIA GAME COMMISSION 25 YEAR CLUB



A. CLINTON GANSTER

District Game Protector
Game Commission Service 25 years

Bounty Claim Clerk from March 16-June 18, 1937
Student Officer June 20, 1937 to February 28, 1938
Traveling Game Protector March 1, 1938 to January 1, 1939 when he was promoted to his present position
Served as Deputy Game Protector and part time employee from October 19, 1931 to December 31, 1936.



LEWIS H. ESTEP

District Game Protector
1237 W. Front Street, Berwick
Game Commission Service 25 years

Served as Game Refuge Keeper from October 1, 1932 to August 1, 1949 when he was promoted to his present position.

PENNSYLVANIA GAME COMMISSION 25 YEAR CLUB

ELDA ROSS

Circulation Manager, "Game News"
14 Banks Street, Penbrook
Game Commission Service 25 years

Served as Clerk Stenographer from date of appointment,
December 2, 1932 to January 1, 1945 when promoted to
present position.



LESLIE H. WOOD

District Game Protector
Wellsboro, Pa.
Game Commission Service 25 years

Served as Game Protector from date of appointment,
February 15, 1932, to date of retirement, January 1,
1958.

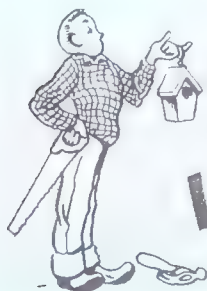


EDGAR M. WOODWARD

District Game Protector
185 Barkley Drive, Bedford
Game Commission Service 25 years

Served as Game Protector from date of appointment,
August 16, 1932, to date of retirement, January 1, 1958.





OUTDOOR FUN WITH A FUTURE



Fun With Birds

By Ted S. Pettit

IF you have a bird feeder or two in your backyard and if you have an inquiring mind, you can start a project now that can easily be one of the most interesting things you ever tried. You can spend as much or as little time as you like, but the more time you spend, the more fun you will have.

In the process, you will sharpen up a skill that is important to every outdoorsman — "observation" — and you will cultivate another trait that will greatly increase your interest in nature and the outdoors—"curiosity." The observing person and the curious person is the successful sportsman. He's the fellow who knows where to find grouse, turkeys or quail. He's the fellow who stands in exactly the right spot on a deer stand and gets the easy shot. He knows where to set his duck decoys for the best results. But he wasn't born with knowledge.

Over the years—or in a year or two—he carefully observed everything he saw and was curious enough to experiment and try to find out "why" things happen as they do. Observation and curiosity pay off. They pay off in fun and they pay off in more successful trips afield with gun or bow.

Many of us have bird feeders in our yards. We tend them regularly

and attract a fair number of birds to our yards. We look out occasionally to see what is there and get a kick out of seeing birds close at hand. But there our interest stops, all too often —when it could be just getting started.

There are a great many experiments that can be carried out with bird feeders and birds that are interesting and fun. Here are only a few—you can think of many more, but these are just a starter.

What Kinds of Foods Do Birds Prefer

Instead of buying mixed seed for birds, buy it unmixed. Try to get sunflower seed, cracked corn, millet, hemp, kafir corn, peanuts, wheat and other seeds.

Get a board about three feet long and ten inches wide and drill eight or ten 1½ inch holes in it. Then get a package of small paper cups such as restaurants use to serve jelly or salad dressing. You might even make some small cups out of aluminum foil.

Place the cups in the holes in the board and fill each cup with a different kind of food. Label the different kind of seed on the board. Place the board where birds feed and watch to see what happens.

What food is eaten first—which cup

is empty first?

Do different birds have different preferences, or do they all eat the same thing? Do jays take peanuts first or sunflower seeds? How about cardinals or chickadees?

Now try the same thing with natural foods. Take a walk along hedgerows or in open fields. Collect weed seeds and what wild fruits you can find. Take these home, separate them and place a different kind in each cup. Which native seeds or fruits are eaten first? and last?

Next try some foods you eat. Try different kinds of fats—bacon grease that has hardened, beef suet, ham fat, lamb fat, chicken fat. Does there seem to be any difference in which kind birds prefer? Try dry cereals, bread crumbs, broken up doughnuts and such foods.

The week after Christmas a few years ago, my family and I were thoroughly tired of our left over turkey dressing. We decided to feed it to the birds, so stuffed it into a couple of wire suet holders out in the yard. Within ten minutes birds

found it and literally fought over it till it was gone. In spite of the fact that there were several other feeders all liberally stocked with routine foods, it was the turkey dressing that attracted them.

A friend who was always successful in attracting a large variety of birds to his yard found that a wintering brown thrasher would eat nothing but buttered whole wheat toast, that has been buttered when hot so the butter soaked in. Other birds ate the toast too—but the thrasher ate nothing else.

What Colors Do Birds Prefer

Another interesting project is to find out whether or not color attracts or repels birds—or has any effect at all on what they eat or do not eat.

Use the same board and cups as in the previous experiment, and select the most popular three or four seeds. Get some of the harmless vegetable dyes used in coloring Easter eggs or cake icings. Get blue, red, yellow, orange and green dyes.

Mix some of the dye and thor-

RARE WINTER VISITORS to feeding stations are evening grosbeaks, a beautiful gold and black member of the finch family. Many interesting experiments can be used with both feed and feeders to study birdlife.

Photo by Hal H. Harrison





UNUSUAL AND SPECTACULAR PHOTOGRAPHY can often be accomplished at winter feeding stations to portray birds in ways not possible at other times of the year.

oughly soak a couple of tablespoonfuls of each kind of seed. When it is colored, and dry, put it out in the cups on the board.

Will jays eat green, yellow, red, blue or orange sunflower seed first? Or doesn't it make any difference?

How about sparrows? They usually flock to ground corn which naturally is yellowish. What happens when the corn is bright green or red? Do they eat it as quickly, or not? Chickadees like ground peanuts, which are white or yellowish. Suppose the peanuts are blue or red. What happens?

Now try dying some suet or other fat.

The easiest way is to melt the fat in a saucepan and mix some dye in with it. Will blue suet or green suet be as attractive to downy woodpeckers or nuthatches as naturally colored fat?

Next, combine two experiments. Try to find out if changing the color of foods that were not top choice in their natural state will make them more attractive to birds. Use the same

board and the same cups. Place some naturally colored seeds that were not top choice along with the same kind of artificially colored seed in the cups. Can you fool birds into eating them or not?

When Birds Feed

Another project requires a photographic exposure meter—any kind will do. This project will also require getting up early on several mornings—before it gets light as a matter of fact. Most outdoorsmen are used to getting up early, so that isn't any hardship.

For a week or two before you start this project, fill your feeders at night—after dark. Then the first thing in the morning they are ready for birds and you will not frighten birds by going out just as they arrive to feed. Keep on filling the feeders at night after you start the project.

Start by getting up early—before the birds do—and watching your feeders. When the first bird arrives, look at your clock and write down the time. Take a meter reading and

write it down opposite the time. Repeat this process as each new bird or flock of birds arrive. Do it several days in a row—or every other day for a couple of weeks.

Then chart your findings. What do you see from the chart? Do the birds arrive at your feeder by the clock or according to light intensity? Do they arrive within a few minutes of the same time, or within a few points of the same degree of light intensity? Do cloudy days make them arrive later?

The same sort of project can be carried out at a crow or blackbird roost late in the afternoon. Do birds come to the roost by the clock or the degree of light intensity? Try it and see!

Swing and Sway

If you have more English sparrows and starlings in your yard than more desirable birds such as titmice, woodpeckers, juncos, chickadees or nuthatches, here's a project that is fun to try. It has been used successfully by people who want to discourage sparrows and starlings, which sometimes clean out feeders before other birds arrive.

Instead of setting out feeders so they are stationary, hang them so they swing when a bird lights on them. They swing back and forth. As an additional gimmick, hang them from a small spring or rubber band, so that when a bird lands on the feeder, it not only swings but bobs up and down.

Watch the feeders carefully and see what happens. Some birds, such as sparrows, juncos, starlings and doves feed on the ground. What happens when they land on a platform that swings or bounces? Will they stay there, or fly away? Is there any difference between English sparrows and white-throated sparrows or song sparrows? Does the swing and sway bother jays and chickadees which are accustomed to clinging to swaying branches? Over the course of several weeks will birds become accustomed to the swinging or bouncing feeders,

or not? Can you discourage starlings from eating all the suet, or from chasing away chickadees or nuthatches by using a small feeder with no perch for the starling to cling to? It's fun to find out.

King of the Roost

If you have watched birds at feeders consistently, you have probably noticed that some birds are almost always successful in chasing away other birds which may be feeding. But have you noticed who chases who? Is it always the larger birds, like jays or starlings, that chase the smaller birds, chickadees or sparrows? Are there any smaller birds that fight back and refuse to give way? Are there birds that come to the feeder that other birds will not try to chase away, but will perch in a nearby tree and seem to wait their turn? Do the observations you made one day hold true all the time, or do they change from day to day with the same species of birds?

For the last two weeks there have been five jays in my yard. At first, I

AGGRESSIVE CUSTOMERS at many feeding stations are bluejays. They will often drive other birds away until they have finished their meal.

Photo by Leonard Lee Rue



had three feeders well stacked and there wasn't much conflict. But I decided to concentrate on one feeder to see what happened. When they were all empty I did not fill two, but put food out in one only. Then I watched.

There was the expected fight. One jay would fly to the feeder and start to feed. Another would fly up and chase him (or her) away. Jay No. 2 would start to feed. Jay No. 3 would replace Jay No. 2. But in the process, enough food would get knocked to the ground so all could feed at once. But then I noticed something interesting.

There was one jay who would not give ground when another bird landed on the feeder. It would stay there, and after a little preliminary "fencing" the two birds would feed together. If a third jay landed on the feeder, Jay No. 2 would fly away, but Jay No. 1 would stay. That one bird out of five would not give ground to any other bird and was the only one (apparently) that would feed with other jays. Why? I don't know but it was fun to observe. Equally interesting things can be seen at any feeder.

Do Other Animals Use the Feeders

Many times other animals will be

Photo by Maslowski & Goodpaster



attracted to bird feeders besides birds. But they come out at night so we do not see them.

One time I noticed that peanuts I put out at night for early morning jays were gone before the jays arrived. Something was obviously taking them during the night. But what? I found out by rigging a camera trap.

I cut a hole through the bottom of the feeder, and fastened a metal washer over the small hole. From that washer I ran a piece of copper wire to one connection on a dry cell battery. I placed a peanut with a thin wire tied around it in the feeder over the hole. The thin wire ran through the hole and extended an inch under the bottom of the feeder. At the end of the wire was a second washer tied to the wire. When the peanut was lifted, the two washers touched and made contact.

From the second washer I ran a piece of copper wire to one terminal on my flash gun. From the other flash gun terminal a wire was connected to the other point on the battery. Thus, when the two washers touched, the circuit was completed and the flash bulb was fired.

I placed my camera on a tripod, and focused on the feeder. I set the shutter on time (this was at night and there was no light in my yard) and waited. About an hour later, the bulb went off.

Upon developing the negative, I found that deer mice were visiting the feeder at night.

In the same way, I found too that a possum visited the feeder as well as chipmunks. What do you suppose comes to your feeder at night? How about putting out food for these animals—why just birds?

These are only a few projects that are fun to work on during the winter. There are others you can figure out for yourself. They are all fun with future, because in sharpening up your sense of observation, you are helping yourself become a more expert outdoorsman.



World Champion Lady Archer

By Tom Forbes

THE place, Prague, Czechoslovakia; the event, the third day of competition in the 18th World Championship Tournament. Among the contestants a team of six American target archers, members of the National Archery Association of the United States pitted against Europe's best. The rains came down and the flags of the competing nations snapped and crackled from their tall staffs as the wind whipped across the tournament field.

Hopes rise high among the competing nations as the rumor spreads that American target archers do not

usually shoot in the rain. Here was the opportunity to overcome the American lead. European archers disregard the weather and wear appropriate rain gear on such occasions, most of which, by reason of the 44 pound baggage limit on air travel, the Americans lacked. Here was the opportunity to overcome the Ameri-





THE CHAMPION draws to the middle of her chin with her head tilted slightly to the left. The string does not touch her nose.

can lead. European archers are accustomed to shooting in the rain. The rain continues and tension mounts as the Ladies Team from the United States moves into shooting position. Mrs. Carole Meinhart makes a slight sight adjustment, nocks a plasti-fletcher arrow in her bow, draws, and in spite of the weather plants an arrow in the ten ring. From that point on the ladies won going away; finishing one, two, three, in the tournament, as did the men. Thus the team representing the United States became the undisputed Champions of the World's target archers, and Mrs. Carole Meinhart, high scorer on the American team, the Ladies World Champion. Seldom in any sport does a single country dominate the field as did the Americans at Prague. The Americans ranked one, two, three, in individual competition for both men and women and captured the men's and women's team shoots.

As an anticlimax and to prove that the title of World's Champion Target Archer was well bestowed, Carole returned to the United States and suc-

cessfully defended her title as Ladies Champion of the National Archery Association of the United States at Sacramento, California in August, shooting a new National round record of 72-578 in which she also set a new record for 60 yards of 48-382. Not content she shot a new Double Columbia record for women of 144-1214.

In her home State of Pennsylvania in September at State College, Carole won the title of Ladies Champion of the Pennsylvania State Archery Association for the third consecutive year with a total score of 2602, the highest total she has scored for this annual event.

Mrs. Carole Meinhart, the World Champion, is a resident of Pittsburgh, Pennsylvania and a member of the Pittsburgh Archery Club. Together with her husband Bob, a class AA target archer in his own right and their nine year old son they enjoy archery as a family group. Carole has been shooting since 1951 and acquired her basic knowledge of archery technique from members of her own club to whom she attributes her own success. Willing to learn and with keen powers of observation she has gradually perfected her own technique with the help of archers she has met in her climb to the top. Her own choice is a laminated bow 64" in length with a drawing weight of 25 pounds at 25 inches. Her draw is 24 inches.

Carole's preference is a bow sight consisting of a circular lens with a black dot in the center. She sights on the target with one eye closed and focuses on the center of the gold bringing the sight into line by indirect vision and always moving into the gold from the same direction. Like many other top flight archers she holds her breath while aiming and releasing. When she is on the gold and ready to release she holds for an instant and then relaxes her shooting fingers and lets the string

slip away. Her shooting hand moves backward in a natural reflex action and she maintains her shooting position until the arrow strikes the target.

The Champion draws to the middle of her chin with her head tilted slightly to the left. The string does not touch her nose. Just before sighting she checks her draw and string alignment. Carole maintains just enough pressure on the back of the bow with the finger tips of her bow hand to prevent the bow from jumping out of her hand. The pressure is taken up in the "V" formed by the thumb and fingers at the base of the thumb and not the heel of the hand.

Aluminum target arrows equipped with plastic vanes which Carole fletches are her choice. She prefers a shooting tab to protect the fingers of the shooting hand and her bow is equipped with a dacron string.

A champion does more than shoot in tournaments and Carole practices an hour each day throughout the tournament season. To her, practice is not just shooting but a concentrated effort to place each arrow in the gold. When she is up Carole takes an objective attitude toward her shooting and analyzes her techniques, so that she can correct any faults that creep into her shooting style.

The title of Champion is well earned. There is keen competition

among the leading women archers of the United States and only 40 points separated the winner from the runner-up at the International shoot. Carole's total score for the four day meet was 2120 and her team mate Ann Clark of Cincinnati, Ohio, scored 2080. Carole gained the lead over Ann on the afternoon of the second day of competition and thereafter maintained the number one position. In the first 60 meter round which consists of 36 arrows at 65.6 yards, Carole shot a score of 309 out of a possible 360, her best round of the tournament. Asked "What was the highlight of the tournament," Carole said, "When the flag of the United States went up in first, second, and third position at the score board." "We were so filled with emotion that tears came to our eyes."

Along the way to the World Championship Carole has amassed a number of record scores. She has achieved six golds at 30, 40, 50, and 60 yards in the American round and in the 120 and 140 yard clout.

The public demands much of their champions and Carole's unassuming and friendly nature have endeared her to all those persons with whom she has come in contact. Truly she is a Champion of whom we Pennsylvanians are justifiably proud.

CHAMPIONSHIP TROPHIES recall pleasant memories of many tournaments.





MINK SETS under small bridges are not as simple as they first appear. All sets must be adapted to conditions found at the particular bridge.



ROCK FOUNDATION for trap should be used in water more than 3 inches deep. Place it mid-way under the bridge against wall and be sure it does not sway.

Mink Sets Under Small Bridges

By Larry J. Kopp

(Photos by the Author)

SETS made under small bridges are to the mink trapper what the dirt hole set is to the fox trapper. The only exception is that setting a mink trap under a bridge is not nearly so simple as it may sound.

PROPER DEPTH of trap can be judged by measuring with your index finger.



Bridges come in various sizes, some have retaining wings; others do not. The current of the water varies—so does the depth. In some cases, tracks serve as a guide—at other times no tracks can be detected at all. And since so many factors must be considered, it would be more appropriate to say that a mink trap must be adapted to the location.

The photographs on these pages illustrate a trap being set under a typical bridge; spanning a small, winding mountain brook. The current is relatively fast and the gurgling sounds which emanate from underneath the structure hint that brook trout inhabit the cool clear water.

The water, incidentally, extends from wall to wall—all of which means that a passing mink cannot easily get by without getting its feet wet. The animal is obligated to hug the wall and swim or glide with the current. In other words, the trap is being set so that it will catch a mink coming downstream.

The same set will not catch a mink



ANCHOR TRAPS firmly to a heavy rock, preferably one that blends with other rocks on stream bottom. Use regular No. 2 fox traps equipped with long chains. Don't forget name tags.

coming upstream unless the current is slow enough for the mink to buck. Should a mink be going upstream, it will pause for a moment, at the corner of the bridge, to peek underneath. If the current is too much for the animal to handle, it will unquestionably jump up on the bank; cross the road; and return to the brook on the high side of the bridge to continue on its journey.

Therefore, your best chance of catching a mink going upstream, would be to set the trap at the corner on the low side—not under the bridge. Obviously, since this trap would then be located on the outside of the corner, a mink coming downstream would most likely miss it.

The only solution to the problem, naturally, is to make two sets. There are exceptions to this and it's largely a matter of determining, if you can, on which side a mink travels while going upstream and which side it selects for the return trip back to the main stream.

It goes without saying, of course, that even though minks often develop a set policy in this regard, they can also be expected to make sudden changes.

A mink may be coming downstream on one side, then suddenly decide to cross over to the other side



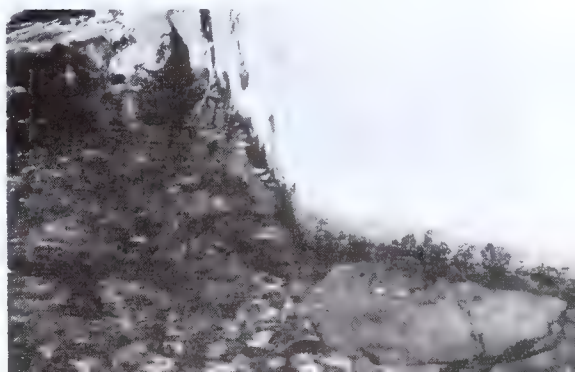
DROP ANCHOR somewhat downstream from trap and arrange trap so that springs form a line parallel with stream. Allow plenty of slack in the chain so that it is not suspended in the water.

when it reaches a bridge; thus missing your carefully made set.

There are reasons for this sort of behavior. Perhaps the water is shallow on the opposite side under the bridge, and so said mink decides to go that way and avoid an unnecessary swim. Or there might be rocks protruding above the water level which the animal decides to utilize in skip and jump fashion; thus avoiding wet feet.

Probably the best thing to do, when you are not certain on which side the animals travel most frequently, is to set your traps on the side where the most effective drowning sets can be made, then placing rocks or other obstacles on the opposite side, which will force a mink to try your side.

IN FAST WATER it is not necessary to cover traps. Movement of water will throw trap out of focus of both human and mink eyesight. In calm water, traps can be camouflaged with a thin coating of mud.



SLANTS and ANGLES



Poetic Complaint

Dear gentlemen of the State Game Commission,

Please give the farmers a hand.
Since hunting is "out" in our town-
ship,

Wild animals roam through the
land.

The pheasants have eaten tomatoes,
Groundhogs like cabbage (green).

'Coons are dining in cornfields,

The hungriest varmints I've seen.
Last year in two of our cornfields

We harvested nary an ear.
Our time and our money was wasted;
Will our work be as useless this
year?

We're leaving our problem with you
now.

Please help us get rid of these pests
Who are stripping the crops from the
fields

Like a bunch of unwelcome guests.

Mrs. Louis E. Orient,
Bridgeville, Pa.

First Aid For Canine Hunters

Dear Editor:

Perhaps the following experience
may be helpful to other readers of
your fine magazine.

While pheasant hunting some years
ago, one of my prized setter dogs was
shot. When I reached her, the dog
collapsed, her eyes were glassy and
staring and she was cold and stiffen-
ing. To the casual observer, she ap-
peared "dead." I forced her mouth
open by grasping her jaws between
my thumb and forefingers of one
hand and with the other hand
reached in her throat and pulled out
her tongue. With my knee I rubbed
her ribs forwards and backwards. In
seconds the dog was breathing.

My companion wrapped his coat
over the dog and I laid over her to

keep her warm, all the while holding
her tongue out since she was still un-
conscious. In a few minutes my com-
panion brought a woolen blanket
from our car. We wrapped the dog
in the blanket, stretcher fashion. I
then broke off a branch of a tree, se-
curing a stick about one foot long
and one inch in diameter to wedge
the dog's mouth open. While we were
moving her, she again stiffened and
the tongue again lodged in her throat
(commonly called "swallowing the
tongue") and she stopped breathing.
I then repeated the procedure of pull-
ing the tongue out and giving arti-
ficial respiration with my knee. In-
stantly, the dog gasped and breathed.
The stick was placed over her tongue
between the jaws and we used her
collar as a bandage to keep it in
place. We finally got the "patient" to
the car and reached a veterinarian
about a half hour later. The dog was
conscious almost as soon as we got her
in the car but we had to repeat the
treatment one more time before
reaching the vet's.

He X-rayed the dog, finding two
pellets in a lung, three in the ab-
dominal cavity, and numerous pellets
superficially. He immediately gave
blood plasma and later that night,
blood transfusions plus several intra-
venous injections. In a week the dog
was ready to come. Her bill was less
than \$25—a small price to pay to save
a good dog.

The following spring we tested her
to see if she was gun shy. She pointed
a pheasant, we flushed the bird and
fired the blank pistol. She was steady
as a rock. I can't help but wonder
how many dogs might be saved if,
when they are accidentally shot, their
masters would "get that tongue out."

Mrs. Lydia A. Caldwell, R.N.,
Allison Park, Pa.

You Can't Do Everything

By Horace Lytle

I'VE a friend who's brought his dog problem to me. The result is he's lost faith in me—but still likes his dog. Which fact in itself may be a good part of what makes the problem. But I've not dared to tell him quite that—though maybe I should!

It seems this dog, one of the pointing breeds, is very staunch on game. The trouble is, so my friend contends, that pheasants are getting to be worse runners every year. They just run off and leave his dog standing there. So all my friend wants me to tell him is how to teach the dog to circle around and head them off!

Now we all know that certain dogs have acquired this habit. Some of the top performers on prairie chickens are known to do the same thing. It can be very effective. But this writer does not believe it to be one of the things that can be artificially taught—such as stanchness, retrieving, drop at command, heel and/or the various other things we are able to bring about by control. We believe this type of performance to be one of those things a dog must either figure out for himself—or never learn. Some dogs are that smart. Others are not. Dogs are as individual as thumb prints.

My friend might, as I've suggested, try urging his dog to step-up at command. But would this dog *circle* ahead—or just move on direct to scent? In either case, would he move crisply—or to cautiously? I wouldn't know, but my guess is the latter.



HORACE LYTLE becomes a regular contributor to the dog column pages with this article. He will share writing assignments with Herb Kendrick. Mr. Lytle is nationally recognized as a leading authority on gun dogs, having written eight books on the subject, judged in many field trials, and served as Gun Dog Editor of *Field & Stream* magazine for 20 years.

It's my guess, too, that this very thing is the main trouble in the first place. An overly cautious dog may get-by on grouse, woodcock or quail—but not on cock pheasants! To pin ringnecks calls for bold, dashing approach. Then dog must not fear the bird—but be sure of his nose, utterly confident of himself, able to sense the exactly-right instant to stop—and then *stay*. Such a dog, whether his approach is from front or rear, will usually hold pheasants for you—the same today as in yesteryear. Or so I believe.

The pointing dog that won't suit me for pheasants is the one that has



learned to fear the bird too much; hence who's approach is too cautious; and then too "sticky" on point. With such a performance a ringneck has usually left before the dog even stops. And he keeps right on going while the dog stands there, impotent. If a dog of this type might figure out to try circling ahead, he'd likely do it so slowly that he'd never catch up; and if there were any sound scheme for *teaching* him to circle, the result would almost surely be the same. For you can't inject *dash* when it's not there to start with. And dash is what's called for in most pheasant cover, such as clover—not standing corn! In corn, too much boldness may but lead to a flush. But is even that much worse than standing helplessly behind a pointing dog that shows you nothing at all?

Many professional handlers are running their dogs today in pheasant field trials—even Championships. Most of these handlers, however, make little effort to work their dogs on pheasants beyond what's absolutely called for. They'd rather take chances on the dog not fearing the bird—thus handling it boldly. The greater the familiarity with pheasants the greater the respect—never contempt. And yet perhaps no Pheasant Champion ever had more work on ringnecks than Village Boy. He won the title twice—never "feared" the bird, nor ever had to. He'd literally punch a pheasant into lying to point. I never saw one elude him. Nor can any man who ever saw him style-up forget what a statue he made as he'd stand high over his game! I judged him once at Conneaut Lake when everything about his work was spectacular beyond words to describe.

We have spoken adversely of an excess of caution, followed by a too "sticky" point. Let's not be misunderstood. Too much caution is a fault only when it involves the approach to game. And a "sticky" point is a fault only when there's no game right

there pinned down tight. When a dog has a bird locked right where he "says" it is, he can't be too sticky. He must stick as if he were marble and built there. No more than a restless paw may be detected, and the bird gone. But if the dog doesn't budge, the bird isn't apt to, either. The bird waits for the dog's next move; and if there is none—well, that's the whole story of it. Fascinated, so to speak, the bird sticks waiting for whatever the next move may be—and any such next move should be *yours*.

Yes, there are many things we can teach dogs. Some we are able even to force upon them, if need be. Such things fall in the nature of discipline. But where brains are called for, that's something else again. If a dog thinks out for himself (as some will) that boldly to circle a pheasant may help you bag it—fine.

But if you've got to try to teach it to him, and with any hope of effective performance, some one will have to tell me how to do it—for I just wouldn't know.

All I'd know to do would be hope—or try another dog. Each dog is individually different from any other. I myself have had several very good on pheasants. And others of but little-or-no value. One of the best quail dogs I've ever known, fell in the latter category.

And so it goes. Dogs differ. It's up to each of us to find one that suits, and realize we cannot change a leopard's spots.

STOLEN GUN

A Remington 12 Gauge Semi-automatic Shotgun, Serial Number 108835X and a brown hunting vest was stolen on November 7, 1957 at New Cumberland, Pa. Anyone having information on the theft is asked to contact New Cumberland Chief of Police Lilley.

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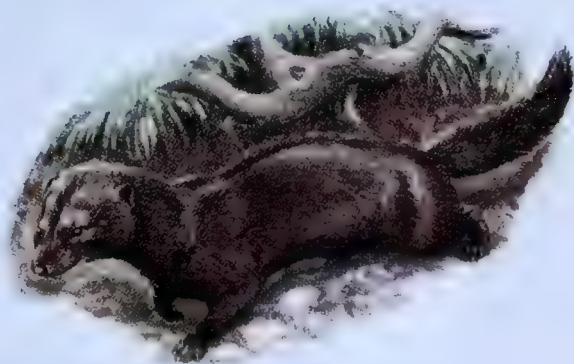
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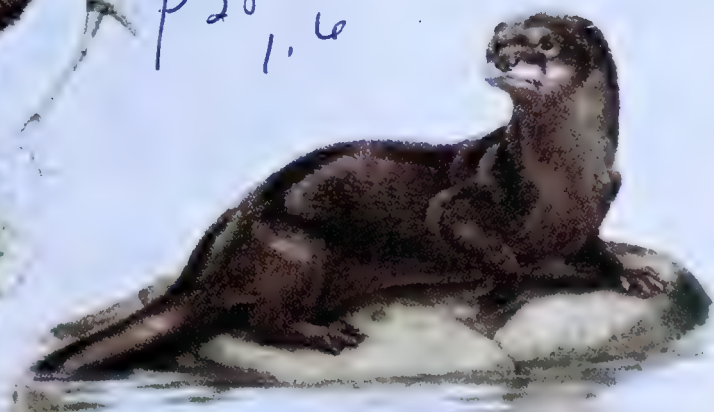
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THE STORY BEHIND THE COVER

UPON the furred hides of these six cover subjects, the early history of a great State and Nation was written. In search of them, America's explorers and pioneers swept across the land. At one time the pelts of some were the standard currency of the new continent and even before the landing of the Pilgrims, Dutch colonists survived because of their trade of fur with the Old World.

Although those days are gone forever, fur is still big business in America. Trappers and fur farmers still produce about 30 million pelts each year with an average worth of almost \$125 million. Even here in highly industrialized and civilized Pennsylvania, fur continues to be an important wildlife crop.

Only marsupial on the northern continent, the opossum is a sort of living fossil. His nearest relative is the Kangaroo of Australia. This unwanted wanderer entered Pennsylvania about forty years ago and although his pelt is practically worthless, he is well known to trappers. Opossums seem to have a special ability to get into good fox or mink sets, thereby ruining them. The skunk, on the other hand, has been a long-time favorite of the farm boy, even if not to his mother. He is one of the easiest of all Pennsylvania animals to trap although he is one of the "seven sleepers" and spends most of the winter below ground.

Far more valuable are the four species of wetland wildlife portrayed below. The muskrat is unquestionably the most important fur-bearing animal in Pennsylvania as well as in the United States. Up to 700,000 may be taken in one year throughout the Keystone State. He is the favorite of amateur and professional trapper alike. More highly prized but not nearly so often caught is the mink. His pelt, when destined to become part of a ladies coat, is still a popular symbol of the ultimate in fashion and favor.

Most valuable of all the furbearers, however, is unquestionably the beaver portrayed by Dr. Poole on the lower left corner of this month's cover. Almost exterminated in Pennsylvania thirty years ago, this "king" of the trapping trade has been brought back through wise and skillful wildlife management. Today, the average annual yield of beavers to successful trappers throughout the Commonwealth totals 3,000 or more. Equally as valuable but present in such limited numbers as to deserve complete protection, the otter seems to be fighting a losing battle for survival in Pennsylvania. Now confined to only five north-eastern counties, this highly interesting and magnificent animal is still classified as a "furbearer" under the Game Law but has not been subjected to an open trapping season since 1951.

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by the

Pennsylvania Game Commission

Commonwealth of Pennsylvania

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★

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PENNSYLVANIA GAME NEWS

Will JohnsEditor

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FEBRUARY, 1958

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Cover Painting
By Earl Poole

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M. J. Golden
Executive Director
Pennsylvania Game Commission

Game Commission Selects M. J. Golden As New Executive Director

THE Pennsylvania Game Commission, meeting in Harrisburg on January 3, announced the selection, with the Governor's approval, of Merton J. Golden as Executive Director. Mr. Golden had been serving as Deputy Executive Director since October, 1955 and since the untimely death of Dr. Logan J. Bennett in September, 1957, as Acting Executive Director.

In assigning to Mr. Golden the leadership of its entire field force and headquarters staff, the Commission indicated a firm conviction that one of its own men who climbed every rung of the ladder to the top could contribute much to the Commonwealth's wildlife management program.

Golden, a native of Jessup, Lackawanna County, is 55 years old. His career with the Game Commission began in 1929 when he became a Deputy Game Protector in his home district. In 1935 he was appointed to the position of Traveling Game Protector with duties in Lackawanna, Pike, Luzerne and Monroe Counties. A year later he was transferred to Berks County where he served as Game Protector until his promotion to Field Division Supervisor of the Commission's Southeast Division in 1940. He held this post until 1949 when he was assigned to the Harrisburg headquarters staff to head the Commission's Cooperative Farm-Game Project program, largest undertaking of its kind in the nation. In October, 1955 Golden was again promoted to the new position of Deputy Executive Director under Dr. Bennett.

It is anticipated that the appointment of Executive Director Golden, a product of the ranks, will encourage Commission personnel to greater achievements in the field. The Game Commission has long favored successive promotions of qualified Game Protectors through Field Division staff positions into senior staff posts at the agency's headquarters in Harrisburg.

The new Executive Director is recognized nationally as an expert marksman, particularly with the revolver and pistol. Among other trophies won in state and regional shoots, he holds the Canadian National Pistol Championship for 1952 when he posted top aggregate score with both the .22 caliber pistol and .38 caliber revolver.

Mr. Golden has hunted all species of Pennsylvania game birds and animals with success and has also made many hunting trips across the nation. He is an excellent wing shot and is particularly fond of woodchuck and crow hunting.

On becoming the chief administrative officer of the Pennsylvania Game Commission, Golden said, "I am greatly honored at this expression of confidence by the Game Commission and the Governor of our great Commonwealth. With the continued splendid cooperation I have received from all Game Commission employees, the sportsmen, legislative representatives and other interested people of this state, I feel fully confident that we can continue to maintain the high standards of performance and accomplishment attained in the past."

THE

WORLD OF THE FUTURE

THE



NED SMITH

Mix Well and Cast in a Hot Mould

By Paul A. Matthews

BEN HOLCOM fingered his pipe through the fragrant aroma of the tobacco pouch, thumbing the long-cut mixture into the bowl and tamping it solidly like he would a ball in the Old Man's muzzle loader. Dragging a blue-tipped kitchen match along the leg of his dungarees, he let it flame for a moment before holding it above the pipe bowl. The blue smoke ribboned upward toward the ceiling, struck the upper strata of warm air and then curled and eddied like a cat stretching in the sunshine.

Outside, the January wind was whipping fine particles of granulated snow through the tops of the hemlocks where they finally sifted downward and struck the window pane, the energy of the wind being expended. Deer season was long since diminished to a few memories waiting for recall in future years like stray dollars from the weekly check deposited in the bank. Spring crow hunting was over the horizon, and target shooting,—well that was something a man could start dreaming about with no fear of exaggerating the expected scores.

Betty shooed Ben away from the window long enough to make a pass at the floor with the mop and he moved on to the next until she reached it, and then he moved back again.

Up the hill from the house, he could see the cold outline of the old hen coop commonly referred to as the Inner Sanctum. The roost had long ago given way to a wobbly workbench, and the brooder stove which now lay rusting in a quiet ravine was

replaced by the pot-bellied stove resurrected from another group of cast-offs. A few dry corncobs for kindling and then some split maple cordwood always turned it the cherry red color of autumn leaves, bringing a feeling of nostalgia to those who grouped around its warmth.

Ben lifted his jacket from a nail behind the door, pulled the collar flaps around his ears and shuffled outside into the wind. Like the Old Man had said twenty years ago, January's the time for a man to start thinkin' about the future; to start getting things ready for the oncoming seasons—and to cast bullets!

"When the crows start their spring flockin' or the chucks start pokin' their noggins above the alfalfa an' clover," the Old Man had said, "we want to be right on tap with lots of shootin' fodder, not a bunch of empty cases waitin' to be reloaded."

Ben remembered the day well. Twenty years ago—maybe longer—January icicles slanting thirty degrees off the verticle due to the wind, and snow running-board high to the old Model T. The Old Man had come charging in the kitchen like a yearling on green pasture to find Ben propped up against the stove, literally digesting the pros and cons of high velocities and big bore and wondering if he could ever completely absorb the endless knowledge of the subject of firearms. The Old Man stomped the snow from his turned-down hip boots, hung his tattered sheep-skin across the back of a chair and moved toward the table where Ben's mother was already pouring a

cup of warmed-up breakfast coffee.

"Mornin' Miz Holcom; hyar, Ben." The two salutations were run almost together.

"Hi," Ben said and then he lost himself for another two minutes in the wind-up paragraphs of a highly controversial gun article.

The Old Man studied Ben carefully through a two-week stubble of grey beard that irritated his cheeks but was much easier to tolerate than exposing a clean-shaven face to the wintry gods of the outdoors.

"We got work to do today, Ben."

"Work? In this kind of weather?"

"Won't be long an' we'll be out shootin'. Got to get some fodder ready now or be sorry later."

"Castin' or loading?"

"Casting today, Ben. We ain't got enough bullets left to make a fair splatter on the floor if they wuz all melted together. I stoked up the fire afore I left an' put the lead pot over with the moulds heatin' up on the back of the stove. Everything ought to be in fair shape by the time we get back."

Ben nursed a cup of coffee along with the Old Man and then the two of them followed the log road up the winding ridge where the weather-beaten shack was poised defiantly against the shrieking wind. The smoke from the chimney was flattened and whipped away into the atmosphere, leaving hardly a trace of its presence. But in the cabin it was warm, mighty warm, for bullet casting is by nature a job that brings out the sweat even in the winter time.

One of the stove lids had been removed and in its place a large cast iron melting pot sunk into the flames, its outer rim barely large enough to prevent the pot from falling into the firebox. Even before taking off their coats, the two hunters, bonded by a cement of gunpowder and lead, peered over the brim and noted the fine beads of melted tin appearing on top of the mixture.



"Won't be long now, boy. The tin always melts first an' the lead follers it like a hound dog on a rabbit."

On the back of the stove up-ended on their slightly spread blocks, were several bullet moulds being heated in preparation for the rifleman's most solemn ritual. There was the old Gould 330 grain hollow point mould for the 45 Sharps, a small 85 grain job for Ben's 25/20, and a long, blunt-nosed design for the Old Man's Krag that still recalled memories of a place called San Juan.

The Old Man scraped at the surface of the metal with a ladle, leaving a bright smear where the globules of melted tin were dragged along. On one side of the pot nearest the center of the stove, the crust broke and the molten alloy showed through, clean and almost oily in appearance.

They pulled the table close to the stove, covering it with a folded blanket to protect the fresh cast bullets as they fell from the moulds.

"If you want 'em to fly straight," the Old Man said, "you got to protect them from getting all battered up. Especially the bases. Ain't nothing worse fer accuracy than a bullet with a lop-sided base. It goes out the barrel wobbling like the hind end of a spaniel on fresh bird sign."

Ben noticed the two pair of canvas gloves and shivered in anticipation.

Prior to this, the Old Man had never allowed him to cast a ball, but let him sit and watch the fascinating operation. Noticing that the lead had all melted, he pulled on the gloves, seized a ladle in one hand and the big hollow-pointed mould in the other. The Old Man started to say something, thought better of the idea and stepped back as Ben dipped the nozzled ladle into the metal. That it came out a solid glob didn't surprise the Old Man a bit, nor did he offer Ben any advice but took his own ladle and hung it over the side of the pot to let it heat to the same temperature as the lead. Ben caught on and washed his ladle around in the alloy until the lead would pour freely through the nozzle. Then he scooped up a dipper full, held it above the mould and tried to pour through the small hole in the spue cutter.

It sounded like pouring thick motor oil, and all the time the silvery stream was disappearing through the spue cutter, Ben noticed the Old Man's jaw bones working like he had a fish bone in his throat or wanted to say something but couldn't. The mould took better than a full dipper of lead before it finally sludged over the hole in the cutter. He hung the ladle over the edge of the pot, swung the mould over the table and struck the cut-off plate with the short piece of broom handle that lay there for that purpose. A small, misshapened piece of lead fell onto the table.

"You forgot to put the hollow-point pin in the bottom of the mould, Ben. The lead run straight through!"

Ben flushed with embarrassment and still muttering apologies, put the pin in place, giving it half a turn to lock it in position. It took scarcely more than a small dab to fill the mould this time and with a smug look that told the Old Man the cat had finally gotten the cream out of the churn, he cut off the spue and opened the mould. The object had

some small resemblance of a bullet, but was so wrinkled and undersized that it could easily have fallen through the bore of the old Sharps without touching a land.

"Now, you little idjit, if you want to take a little time larnin' I'll show you how its done."

If Ben hadn't noticed the Old Man's Adam's apple bobbing up and down his throat, he'd have thought that finally the Old Timer was thoroughly provoked. He hung the ladle back in the pot, put the mould aside and watched while the oldster put a lump of beeswax in the bullet metal and began stirring furiously. Huge clouds of black smoke belched upwards and about the time the Old Man's face was completely hidden from view, the smoke ignited and for a split second flames licked at the ceiling, then died down rapidly. There was an odd smell of burnt hair in the room and the Old Man muttered something under his breath about being closer than he'd planned on.

"You always got to flux your metal," he explained to Ben, "if you want it to flow smooth-like in the mould. And another thing. This metal is alloyed one to sixteen; that is one pound of tin to sixteen of lead or thereabouts, and the metals don't mix good unless you flux it. The tin tends to float on top of the lead. Now hand me that Gould mould, and I'll should you how to run a bullet."

Ben handed the mould over and the Old Man went to work with a rhythmic motion that belied years of experience. The first ten or fifteen bullets he made no attempt to retrieve on the blanket.

"They won't be any good until the mould gets het up like the lead an' gets all the oil burnt out of the blocks. That's what makes all them wrinkles you had and gives you the rounded bases like I was telling about."

When the Old Man finally did

dump a bullet on the table, it was shaped perfectly with clear cut grooves, sharp-cornered base, and an even hollow-point. "Ain't nothing to it if you learn how it's done before wallern' around in the lead pot!"

The Old Man's hands worked in perfect unison, always going through exactly the same motions and with the same results. Dip the lead from the bottom of the pot; hold the mould on its side with the spue hole against the nozzle of the dipper; tip them both up together for about fifteen seconds and then remove the ladle. Ben could see the small puddle of metal harden and then the Old Man cut it off with a sharp blow against the spue cutter. After half a turn with the hollow-point pin, he opened the blocks and dropped out the shiny bullet that was to scat down the range in the not too distant future.

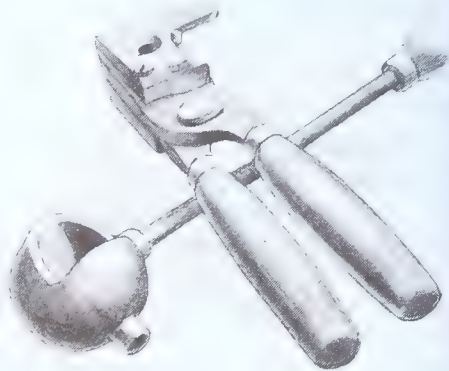
Taking the thirty caliber mould for the Krag, Ben tried to copy the Old Man from every motion of his hands to sticking the tip of his tongue through the corners of his lips. Even that seemed to help the accumulation of bullets on the table.

The lead in the pot went down slow, a lot like shoveling dirt out of a hole. At first the pile of bullets grew fast and then as the novelty of the job wore off and the heat of the mould made itself felt through the gloves, the production lagged. Ben changed from the Krag mould to the cooler 25/20 and the speed at which the bullets hardened in the cooler mould was quite noticeable for the first dozen or two, and then as it became hotter, the monotony of waiting for the spue to harden seemed unbearable.

"Must have at least a hundred of each kind, by now," Ben said, hoping the Old Man would take the hint and signal for a coffee break. But the Old Timer merely nodded his head in agreement and went on casting, expertly and efficiently, with a perfect bullet at every opening of the mould.

When the lead in the pot began to get too hot and the bullets took on a frosty appearance, the Old man added small ingots of premixed alloy or several pounds of retrieved bullets that had flattened themselves in the bank behind the target butts. Then the mixture had to be fluxed again and the impurities skimmed off the top. It was hot, tedious, smoky work, but the Old Man never slowed a bit. It was as though he had been born with a mould in one hand and the ladle in the other, and his life depended on the number of bullets and the perfection with which they were cast.

In the middle of the afternoon they finally stopped, not because the Old Man had any desire to quit, but because the table top was completely covered, and to cast another ball meant dropping it on top of one previously cast—a battered base—an inaccurate shot sometime during the summer or the fall squirrel season. From under the bunk along the wall, the Old Man produced several coffee cans he had carefully hoarded, and in these, they stored the products of the day, packing them very carefully base down, and separating the layers of bullets with circular pieces of cardboard. For the normal man, they had enough shooting fodder to last a lifetime; for the Old Man and Ben they had half enough for a year.



Later, as they relaxed over roily coffee, the Old Man said, "next Saturday we'll give her another whirl."

"You mean we ain't done yet?"

The Old Timer's grey eyes squinted a bit as he thumbed tobacco in the corncob pipe, scratched a match on the side of the table, and sucked the flame into the fine-cut clippings that probably had been mixed with corn silk or the toasted inner bark of green willow.

"Ben, a rifleman is never *too good* a shot. If'n you have a hundred cat-tiges and yore life depends on just one, use ninety-nine of 'em fer practice an' make the other one count!" He blew a cloud of smoke toward the smudge-stained ceiling, and then to emphasize his words, pointed the pipe stem at Ben.

"My Dad once told me that the right to own a rifle was probably the greatest privilege in the world, and the right to go huntin' is the greatest heritage ever bestowed on the common, ordinary man. We mustn't ever take these rights lightly, Ben, because the man who has a rifle and doesn't know how to use it, is a potential murderer in the worst sense of the word. He's the kind of a feller that shoots his gun in the woods jest to hear the noise, not thinkin' about where the bullet's going to fly or what its going to hit. He's the kind of a feller that helps leave a crippled deer in the woods for every five that's taken out.

"Now I aint' sayin' that every man has to go whole hog on it like you and I do. We just happen to like it a bit better than most of 'em, but the least that a man can do is to learn how to use his rifle afore he goes in the woods. He owes that much to the game and to every other hunter afield, and then when the real test comes, like it did with Dad at a place called Gettysburg, the man that knows his rifle ain't going to be the weak link in the chain.

"Cast bullets, Ben, makes a lot of shootin' easy on the pocketbook; and a lot of shootin' is a mighty good way to start a lad your age along the right track."

Throughout the twenty years, the Old Man's words had never lost their meaning, and although Gettysburg became a monument to brave men, Ben saw other places where the final examination was punctuated with exclamation marks and periods from an M1.

The old hen coop was drafty, and as he huddled over the gasoline plumber's furnace waiting for the heat to warm up the Inner Sanctum, he scraped the ladle across the top of the bullet metal. Lead, he thought, is a lot like a young lad just starting to hunt. Cast him just right, and he'll fly true; cast him in a cold mould and neglect to flux him with good understanding, and he'll come out a misshapened piece of lead.

FREE MATERIAL FOR GUN CLUBS

Nomenclature charts have been in great demand for club rooms, especially among instructors working with junior groups in hunter safety classes. Remington Arms Company is ready to supply three different charts, 21 by 25 inches, that simplify instructor's discussions of guns and ammunition.

Remington also will provide construction plans for silhouette running deer targets that are excellent for off-season practice and as an aid in sighting-in rifles.

For this free material, clubs can send a post card to: Remington Arms Company, Inc., Shooting Promotion, Bridgeport 2, Connecticut.



Why - and How - Deer Starve

By James A. Lee

IN ANY deer management program, one of the major problems confronting the conservation agency is the role of nutrition as a decimating factor in herd mortality. In areas, such as Northern Minnesota, where mortality is experienced among "yarded" deer during the winter, it is usually explained as malnutrition.

Until recently, there was no reliable diagnostic technique that could be used to determine if malnutrition was responsible, directly or indirectly, for the death of a deer. Carcasses found in the spring following the melting of the snow were often in

such a state of deterioration that post mortem findings were unsatisfactory. These carcasses had been ravaged by decay and scavengers and only the skeletal remains were left for study.

The discovery of a technique to correctly determine whether or not death had been preceded by emaciation, heralded a new approach to the problems of starvation in deer. The use of bone marrow as an index to malnutrition in deer is based on the knowledge that a starving animal exhibits a marked reduction in the fat content of the marrow.

JAMES A. LEE is technical assistant to the Director, Division of Game and Fish, Minnesota Department of Conservation with headquarters in St. Paul. His article originally appeared in the March-April, 1957 issue of "The Conservation Volunteer," official bulletin of the Minnesota Department of Conservation.

Animals in top-notch healthy condition reveal a marrow in the femur (leg bone joining the pelvis) which is nearly solid white fat. When in a state of starvation, the femur marrow is yellowish-red or red, and of a gelatinous consistency. Anemia-like conditions, associated with the starvation process, can alter the color of the marrow somewhat; the marrow, of course, being the principal site of red corpuscle production.

Now that the incidence of starva-

tion caused mortality in wintering deer herds could be fairly well determined, some wildlife scientists became interested in the actual starvation processes and how they manifested themselves.

For instance, they had seen deer die with "full stomachs," and more often than not, the stomach contents proved to have nutritive values. Such a condition was commonly known to those who engaged in artificial feeding of nutritious food concentrates to wintering deer, in an attempt to stave off starvation. Subsequent autopsies revealed these deer to be "starvation deer." This unaccountable fact spurred some research efforts, aimed at a better understanding of the physiological changes surrounding starvation.

Is there, perhaps, a "starvation threshold" beyond which there is no hope of recovery regardless of the nutritive value of the food eaten after this "threshold" is crossed? Research has shown that this is probably true; that when emaciation has reached the point wherein body tissues are being

drawn upon to sustain life (as evidenced by a marrow fat content approaching ten per cent or less of normal), recuperation is impossible.

But why, many ask, should deer who are approaching starvation fail to recover when nutritious food concentrates are fed to them? Well, of course, some do, but here again wildlife scientists are faced with many unsolved problems.

A deer is a ruminant, such as a cow, and has a digestive physiology which is very similar. The stomach, or rumen, contains bacteria and one-celled organisms (protozoa) that are highly specialized in breaking down the food materials and providing for the assimilation of the nutrients by the animal. In fact, what is not generally known, is that **these organisms must be nourished first, since their bodies and the end products of their metabolism are what nourish the deer.**

Yet virtually nothing is known about these important organisms and how they actually function. Why do deer fail to thrive on certain winter

INSPECTION OF BONE MARROW is the best known technique in determining whether or not a deer has starved. Animals in top-notch health reveal a marrow in the femur (leg bone joining the pelvis) which is nearly solid white fat; starved deer a femur marrow of yellow-red or red color.



browse species, for example, which analyze well chemically from a nutritive point of view? Why are these rumen organisms unable to properly utilize artificial food concentrates ingested by deer? Are they so highly specific in their requirements that they fail to make available certain amino acids (body building blocks) necessary to proper body maintenance and growth?

Does a deer which has been feeding exclusively on woody browse undergo, perhaps, a complete demise of these rumen organisms, when its diet is suddenly switched to alfalfa hay, oats or some other artificial food? Research has indicated that this might be the case and points the way toward a better understanding of death on a "full stomach."

Proteins, and the every day need for them, is a subject only too familiar to people who watch TV, listen to radio, or read advertisements. Proteins are needed by people and they are needed by deer. The major difference is that medical science has determined the protein levels needed

EMBRYO RESORPTION is known to occur in starving female deer. Exact point in starvation process at which a pregnant doe will resorb one or more of her unborn fawns is not known.



by humans, and nutritionists are seeing to it that we receive it in our daily foods.

Wildlife scientists, on the other hand, know very little about the protein requirements of deer and only slightly more about the general level of crude protein available to them.

It can be quickly seen that a deer who does not meet its minimum protein requirements is forced to draw upon its own body tissues—**starvation has started.**

This, again, raises the question of how long a deer can be malnourished and still recover? Does a sex or age differential exist in this respect? Do pregnant does have a higher crude protein requirement than bucks or non-pregnant does? At what point in the starvation process does a pregnant doe resorb her embryo (s) to satisfy a protein deficiency?

Knowledge of these and many associated problems can only be gained through research. Answers when they are found, will lead to a host of other problems. For example, are the badly over-browsed, preferred species of plants growing on our deer range the result of a palatability preference or a physiological need? Which browse species should be particularly encouraged in the deer herd's winter range area?

Research designed to evaluate the efficiency of digestion of the key browse species would provide an insight. The inability to efficiently digest foods results in a feeling of "fullness," loss of energy, and subsequent use of fat deposits in the body. **These are the subtle beginnings of starvation.**

Much more could be written on what we **don't** know about starvation in deer. To those who would scoff at fundamental and basic research on problems such as these, let them provide the answers to some of the questions posed. Wildlife managers are eager to translate this information into applied management.

Outdoor Reveries

Changing Season

By John H. Day

THE lonesomest spot in all the countryside, the one which the winter has made most vacant of all, is the thicket corner where hangs the great gray nest of the white-faced hornets. Its door stands hospitably open but it is no longer thronged with burly burghers roaring to and fro on business that cannot wait. While the warm sun of August shone down on it that entry way knew the jostling bustle of a great swarm of selfless toilers. Now the gray paper shell hangs empty, a ghostly lonesome reminder of the roaring energy and social unity which had gone into its building.

Most people misunderstand the vim and vigor of the hornet, and his near of kin the yellow jacket and the nervous wasp. Universal opinion holds that these fellows are entirely too hasty in getting to the point in any argument. They certainly brook no interference with their right to a home and the bringing up of the family. In defense of these rights they are certainly hasty.

Disturb not the even tenor of his home-building and home-keeping way and the white-faced hornet becomes a most interesting creature. One of his kind used to visit the tent in which I camped one summer and we got to be good neighbors. At first I viewed him with distrust, but he dodged my blow and landed plump on a housefly



that was rubbing his forelegs together in congratulatory manner on the tent roof.

This fly had without doubt been mingling with germs of superior standing, but his happiness over the success of the event was of brief duration. There came from his wings just one screech of alarm followed by an ominous silence. Then came the deep roar of the hornet's propellers as he rounded the curve through the tent door and gave her full-speed ahead on the home road.

An hour later he was back, had captured another fly almost immediately, and was off. He came again, many times a day, and day after day, until I began to follow his flights with the interest of an old friend. He never bothered me or anyone else. The capture of house-flies was his vocation and it demanded all his energy and attention.

He used to go bumbling and butting about the tent in a near-sighted excitement that was humorous to

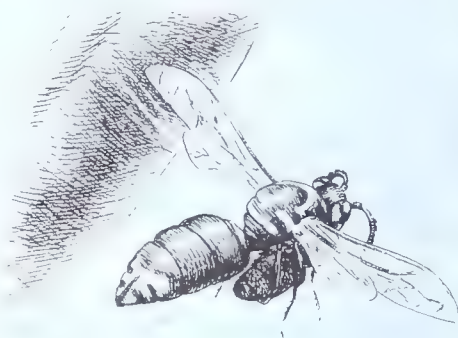
behold. He didn't know a fly from a hole in the tent pole, and there was a tack in the ridgepole whose head he captured exultantly and let go in a sort of slow wonder every time he came in. A cloud over the sun delayed him and in wet weather he was never to be seen.

His method with the fly in hand was direct and effective. The first buzz was followed by the snip-snip of his shear-like jaws. You could hear the sound and see the gauzy wings flutter slowly to the tent floor. If the fly kicked much his legs went in the same way. Then the hornet took a firmer grip on his prize and was off with him to the nest, where the hapless victim became chewed-up fly soup for hungry hornet larvae.

The climax of the work of the great paper hive in the thicket was reached in August. The new queens had been reared to maturity. The first chill days of autumn brought rain and the change from bustling life to silence was almost startling. Almost in a day the hive was deserted. The chill of autumn laid the cold hand of death on the busy white-faced workers. Numbed with cold, they died wherever the chill caught them. Only the queens had vitality to withstand the winter.

The gray nest in the thicket, hanging like a jack-o-lantern above the drifted snow, is pathetic in its emptiness. I shiver in a sort of sympathetic loneliness as I pass that way. And then I forget the loneliness as I think of the busy worker who used to come into my tent, and having caught his fly, hung head downward from ridgepole or canvas-edge by one hind foot while all his other feet were busy holding his lamb for the shearing.

The only groundhog I ever saw on Groundhog Day gazed back at me from the pages of a roto section, his prophetic countenance surrounded by journalistic tributes to his prowess as a weather seer. All the groundhogs of my acquaintance sleep entirely too



HORNET AND
HOUSE FLY

soundly to wake up on a February Day, no matter what inducements. I once came across a sorry-looking woodchuck frozen stiff at the entrance to his burrow, while biting winds sent cold drifts of snow crystals hurtling across the hillside. This fellow had evidently been struck down by disease and had come upstairs to die.

Probably the groundhog's greatest claim to fame is his ability to go to sleep in the fall before cold weather and not wake up until the spring has again brought out the green things for his delectation. Mr. Wardle's fat boy from Dickens' immortal pages never slept as the woodchuck sleeps, however well he matched his eating. When the sun of October swings low in the south, and he has become so fat that he seems to roll to and fro from his burrow on casters, he retires to his snugest chamber, tucks his nose in between his little black-gloved forepaws, and goes to sleep.

The groundhog is without doubt one of the founders of vegetarianism. He added inches to his girth when he learned that red clover which the early settlers kindly brought with them had a nourishing quality that defies competition. He can get so fat on clover that when he retires for the year he is as near a complete globe as anything with feet and a face can ever be. He can get no fatter than

that on garden truck, but he likes it better.

One year when I had projected a rather ambitious garden plot a groundhog moved in to supervise. In early dawn, when the dew was on the lettuce he would take his toll of the bed, seasoning it with a raddish and a snip at a leaf or two of parsley. These were mere appetizers for the feast. His next course was the peas. He would go down a row and eliminate everything but a stubble of tough butts that had been shorn of their ladylike and smiling greenness.

These eating chores were his occupation, his day's work, so to speak, and he went at them at the first blink of dawn and got them off his mind. Then he retired to his burrow just on the corner of the garden before either the sun or I got up and slept the dreamless sleep of one who has labored righteously and fed well. I suspect him of letting out his belt a hole a day on the plethora of proteins I had been coaxing along all spring.

The only time the groundhog really works is when he is digging his burrow. Apparently this is a distasteful task and he wants to get it over as soon as possible, for he makes the dirt fly until it is done. When his den is dug out, he'll often escape by burrowing off through the soil like a mole, managing somehow to avoid suffocation.

Precisely at 11 A. M. on February 2 the grizzled whistlepig is supposed to shake off the grogginess of his long sleep and crawl out of his cozy burrow to blink his weather eye and give his down-to-earth prediction on winter's chance of keeping a grip on things. What he don't know about the weather would fill a lot of books. It may be, as the radio thriller has it, that "the shadow knows." Of course, if there's no shadow, nobody knows.

Actually the groundhog as a weather seer is neither an imposter

nor a hoax, but a plain case of mistaken identity. The early settlers had long associated the Candlemas Day legend with a different animal—the European hedgehog. When they got over here the nearest thing they could find to the familiar creature they had known back home was the woodchuck. So the whistlepig had to accept an appointment he didn't seek and has never been able to reject.

Part of the summer scene is the occasional sight of the 'chuck sunning before his den, or foraging in his favored clover patch. The first days of February would be drab indeed had we not the Groundhog Day legend. Say's Riley's farm boy, to whom fell the onerous task of keeping the wood box filled:

"Nothin' ever made me madder

Than for Pap to stomp in, layin'
On a' extra forestick, sayin'

'Groun' hog's out and seed his
shadder!"

Songsparrows are singing once again whenever the February sun peeks through to warm up the dawning. Now the die is cast. Once these little streak-breasted fellows move into the choir lofts it's only a matter of time. From now on, no matter how much zero weather nor how deep the morning snow, the countryman hangs on to his hat as the way-side flees down the calendar into



spring. From some stray breeze, errantly freighting a breath of the tropics, the songsparrows got the word.

Man is never alone upon the earth so long as he walks with the sound of bird voices in his ear. It is said that if man were to live in a world of absolute silence he would soon go mad. Dark and forsaken would be the land where no bird voice was heard. Even in the dead of winter the crows and starlings, the titmice and woodpeckers speak with reassurance that all's right with the world.

But when the friendly little song-sparrow sits high in the lilac bush at the garden's edge and sings: "Jesus loves even me-me-me-me-me!" the winter-jaded countryman feels a quickening of his pulse at the thought of the misty green days not far off. He thanks his God for the joy of living in a wonderland where the rolling seasons change and where "the time of the singing of birds" precludes the vernal awakening.

Melting snows and drizzling rains have soaked the forest floor. I couldn't find a log dry enough to sit down on and loafed for a time leaning against the great bole of a tremendous black maple. Already the dampness underfoot was getting in its work. The leaf mulch had packed into a soggy mass, rotting down to the rich humus which feeds the tiny rootlets of woods flower and forest monarch alike.

In the pine plantation edging the timber I had seen golden crowned kinglets and a brown creeper, with the usual entourage of chickadees. Here in the heart of the woodland a small flock of juncos was busy about the tangled remains of a huge windfall. The day was overcast and in the gloom their white outer tail feathers showed up like neon lights. For some reason the woodpeckers were elsewhere. I didn't see one of these chisel-billed fellows all day.

The great Rail Splitter who knew so well the mid-continent woodlands

of his young manhood would hardly recognize the sorry cut-over tracts we call timberland nowadays. He would seek in vain the chestnut which lent its straight-grained lengths to his axe and wedge and splitting maul. He would fail to find the tall stands of tulip-poplar which once reached high for the sun across the rolling hills. The white man has surely been a poor steward.

Once past Valentine's Day the countryman knows that winter is on the downgrade. There may be a few more blizzards, but the driving sun, roaring back from his wide swing south of the equator, makes now short work of the most stubborn drift. The calendar says it is still winter, but we have once more heard the sound of rain and running brooks. There will be a certain day when the air comes in over the hills with a different feeling. It's an evanescent, intangible feeling, but all countrymen know and love this first soft promise of the returning spring.

OUTDOOR REVERIES END

With this chapter, the series of nature essays by the late John H. Day, a regular feature of this magazine since September, 1950, comes to an end. Mr. Day died suddenly last October. "Changing Seasons" was written shortly before his untimely passing and may well have been the last manuscript ever to emerge from his typewriter and from his heart.

John Day was born in Washington, Pa. and attended public schools there. He was graduated from Washington & Jefferson College in 1926 and recently took a master's degree in English at Pitt. His writings were widely known. In addition to the series in *GAME NEWS*, his nature columns appeared in many newspapers throughout the East.



WALKIN' SHOES

By NED SMITH

Common Winter Birds of the Woodlands

1. Can you name Pennsylvania's largest woodpecker?
2. What common winter bird has a bright orange-red bill?
3. How did the nuthatch get its name?
4. What bird is nicknamed the "Tea-kettle bird?"
5. Can you name three winter birds that have crested heads?
6. What family of birds is especially adept at gathering food from the underside of limbs and branches?
7. Which is our largest wren?
8. What common winter bird sings its name?

After reading the following article you should know the answers to these questions. How many do you know **before** you read it?

MID-WINTER might seem like an odd time of the year to be studying birds, but actually it's the best season to learn to know your feathered neighbors. The hordes of birds that invade our woodlands in the spring only result in confusion, and the amateur bird student will do better to start his field work during the cold months when the avian population is considerably sparser. Once the winter birds are mastered he will be in a better position to cope with the spring migration.

In this article those species usually found in fields and meadows, game birds, and the rare or irregular winter visitants will be omitted. The heroes of this piece are the common birds that might be met with in the dead of winter in your favorite deer or

grouse coverts or along that secret trout stream.

With few exceptions our winter birds have decided preferences as to feeding places. Some clamber about the tree trunks and large limbs, seeking their food in the form of insect eggs, cocoons, and hibernating insects in crevices in the bark. Others glean their living mainly from among the smaller branches and twigs. Still another group finds its food on or near the ground, scratching among the leaves and searching through the underbrush.

Because these habits frequently provide a clue to identification the birds have been grouped according to their feeding preferences in the following descriptions and the accompanying illustrations.

1. DOWNY
WOODPECKER

2. PILEATED
WOODPECKER

4. WHITE-BREASTED
NUTHATCH

5. RED-BREASTED
NUTHATCH

3. BROWN
CREEPER

BIRDS FOUND ON TREE TRUNKS AND LARGER LIMBS

**Birds Found On Tree Trunks
And Larger Limbs**

1. **Downy Woodpecker.** A sparrow-sized woodpecker—white beneath, black with white polka-dots above. The male has a small red patch on the nape of his neck. This smallest and most common of our woodpeckers is the one usually attracted to feeding counters that are provided with suet.

Hairy Woodpecker (not shown). This bird is a larger edition of the downy. Aside from his size and slimmer build he can be distinguished from the smaller species by his plain white outer tail feathers. Those of the downy's are barred with black.

2. **Pileated Woodpecker.** This striking bird is fond of big timber. Its plumage is a bold pattern of black and white topped with a showy red crest. Crow-sized, it is our largest woodpecker. The pileated's ringing "Kuk, kuk, kuk" is a distinctive

woodland sound, louder and more irregularly uttered than the flicker's cry. Huge rectangular excavations in trees are evidence of this bird's presence.

3. **Brown Creeper.** Inconspicuous in every way, the brown creeper is more abundant than suspected. Smaller than an English sparrow, its brown and white streaked and mottled body is anything but eye-catching. Its call is so weak it usually goes unnoticed. The creeper's feeding pattern is quite unvarying. Beginning at the base of a tree it hitches its way up the trunk, meticulously searching every cranny in the bark for hidden food. Somewhere in the upper part of the tree it suddenly lets go all holds, drops to the base of another tree, and resumes its near-sighted, ascending search.

4. **White-breasted Nuthatch.** This stubby little bird dressed in blue-gray, white, and black is one of our most accomplished avian acrobats. Hop-

ping down a tree trunk headfirst or crawling about on the underside of a limb is all in his day's work. The name "nuthatch" refers to his habit of wedging a soft shelled nut or large seed into a crevice and hacking it open with blows of his bill. The call note is a peculiar nasal, "Yank-yank-yank."

5. **Red-breasted Nuthatch.** Smaller than the preceding, this bird is roughly the size of a house wren. A black line through the eye and a rusty or buffy tinge to the under parts further distinguishes him from the white-breasted nuthatch. His call is a series of "Na-a-a's" sounding for all the world like a tiny toy trumpet.

Birds Found Among the Smaller Branches and Twigs

6. **Black-capped Chickadee.** The cheery little chickadee in his neat gray and white coat and natty black cap is everyone's favorite. In the

woods his inquisitive nature quickly exerts itself when he discovers you standing nearby. As often as not he will flit to a branch within a few feet of your face and inspect your countenance with all the unabashed innocence of a small boy. At the feeding shelf he becomes unbelievably tame in a short time. The chickadee is smart enough to know that a dead, curled-up leaf stubbornly clinging to an otherwise bare branch makes a good hideout for tasty insects, and his presence is often announced by his noisy onslaught against one such leafy fortress. His call is a pert "Chick-a-dee" or an abbreviated "Dee-dee-dee."

7. **Tufted Titmouse.** An excitable slate-gray bird with a topknot on his head—that's the tufted titmouse, no mistake about that. This sparrow-sized bird is always in a tizzy about something. Anything from a squirrel to a human will start him fussing,



and the discovery of a screech owl hidden away in a hollow chestnut tree is enough to call in all the titmice in the county. This amusing fellow usually travels with a flock of his own kind, and frequently with a gang of chickadees.

8. **Ruby-crowned Kinglet.** An extremely tiny bird, the ruby-crown moves from twig to twig with a restless persistence that makes it difficult to see what he really looks like. His upper parts are a soft olive, brightest on the rump, and the underparts are nearly white. A pale eye-ring accents the beady eye. A flaming red crown patch that is usually concealed is occasionally erected, much to the surprise and delight of the viewer. As a matter of fact, this bustling example of perpetual motion is full of surprises. One of the most delightful is his intricate and exquisitely beautiful spring song, a roundelay that seems much too large for so small a bird.

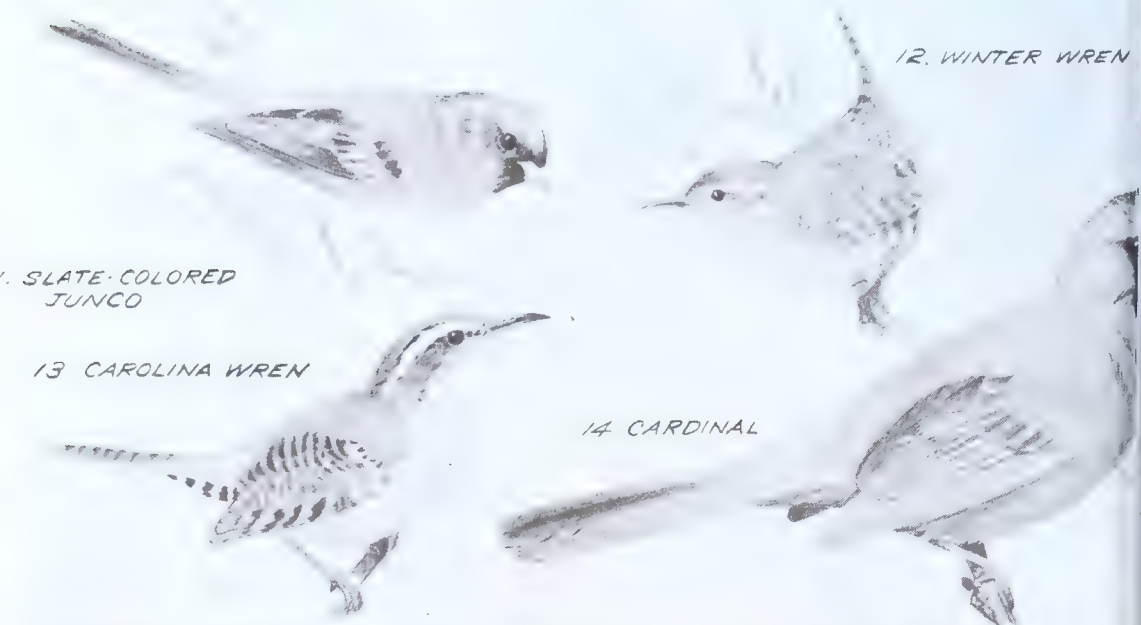
9. **Golden-crowned Kinglet.** Even smaller than the preceding. This feathered mite derives its name from the black-bordered yellow crown patch. In the male the patch is adorned with a bright orange center.

10. **Blue Jay.** The size of a robin with a long tail this striking bird is unmistakable. His back and crested head are a delicate lavender-blue, his wings and tail bright blue barred with black and tipped with white. Boisterous is the word for Mr. Jay. You always hear his harsh "Jay, jay, jay" or more melodious whistle long before you see him. In the matter of food, the blue jay seeks it everywhere and anywhere. Consigning him to this group was more a matter of convenience than accuracy.

Birds Found On the Ground Or In Underbrush

11. **Slate-colored Junco.** The familiar little "snowbird" looks for all the world as though he had momentarily squatted in a saucer of white paint. The line of demarkation between the gray upper parts and white underparts is surprisingly sharp. Identity can be clinched by the white outer tail feathers that are evident in flight. The junco is fond of weedy fields, but is equally at home in the woods.

12. **Winter Wren.** Small, even for a wren, this dark, short-tailed busybody is constantly poking into the dark re-



11. SLATE-COLORED JUNCO

13 CAROLINA WREN

14 CARDINAL

12. WINTER WREN

BIRDS FOUND ON THE GROUND OR IN UNDERBRUSH

cesses beneath roots, stumps, and windfalls in search of a meal. It is often mistaken for a mouse as it scurries from nook to cranny. When disturbed the winter wren expresses its displeasure with an occasional "Chip-chup."

13. Carolina Wren. Our largest wren—a reddish brown creature with a prominent pale stripe above the eye. The Carolina wren is fond of brambly places, and woodland slashings have a particular fascination for him. Here he can play hide-and-seek among the fallen limbs and grape vines, taunting the human intruder with a great variety of trills, clacks, and odd metallic sounds. The song is a surprisingly loud "Tea-kettle, tea-kettle, tea-kettle," giving the bird the local nickname of "tea-kettle bird."

14. Cardinal. If more birds were as distinctive in appearance as the cardinal, the neophyte bird watcher would have an easier time of it. The male is our only all red bird—all red, that is, excepting the black patch around the base of his brilliant orange-red bill. The female is olive brown above and pale buffy gray below, the crest, wings, and tail showing a strong tinge of red, especially in flight. The prominent crest adorns the head of both sexes. The cardinal's loud, clear "Cheer-cheer-cheer" is sung from the treetops, but except when singing he prefers to haunt the thickets and the ground beneath.

Well, that just about completes the roll of common winter birds of our forests. Generally speaking they're not a particularly colorful group, and except for a few there are no notable singers among them. But they do add a welcome touch of friendliness and cheer to the bleak February landscape. For that virtue alone they are worth knowing.



STRANGE GUARDIAN

By George Dyak

The silent depths of a forest in Somerset County holds the secret of a mysterious grove, locally called "The Lost Orchard." Strange and interesting speculation surrounds the probable origin of the grove.

Some time ago, while wandering along the lonely, yet hauntingly beautiful reaches of the grove, a visiting hunter got a quick sight of a buck deer. He fired at the approximate instant the buck jumped into a thick clump of brush. At the same instant, there was an abrupt flash of scarlet in the thicket dead ahead. The nimrod froze in sheer horror! A fellow hunter had moved squarely in the line of fire, seemingly popping out of nowhere.

Dropping his still-smoking gun, the youthful nimrod lunged wildly through the tangled brush. But to his amazement, he discovered the other man in the thicket, although considerably pale and shaken, was unharmed. Looming eerily in the rank growth around him were crumpling stones of a long-forsaken graveyard. The tombstone that had saved his life bore a time-eroded inscription of which only two words remained distinct. They proclaimed: "SAVING GRACE."



W. S. Smith



Black Bullseyes With Feathers

By Robert Bell

IN Franklin W. Mann's book, *The Bullet's Flight*, he wrote: For many years, in fact from boyhood, it has been our ideal to find or construct a rifle that would hit and kill a crow at an attainable distance, but during this year (1899) that long-cherished object was abandoned. The size of the groups made in the past . . . did not encourage the anticipation of hitting crows whenever desired . . . Henceforth attention was turned towards woodchucks.

Dr. Mann continued with an episode about 'chuck hunting and evidently set the pace for the countless number of articles on varmint shooting published during the last fifty years, for the woodchuck has definitely been accorded the number one spot in the varmint shooter's affections. Perhaps he deserves this distinction. (It's doubtful if the 'chuck is enthusiastic about his place of honor, though!) However, he is not the only varmint available to the feller with a bull-barrel, scope sighted rifle. It's time we looked at another target, one more numerous in most localities, even more difficult to hit, and usually available the year 'round. This target is the common crow.

Since the end of World War II the number of varmint shooters has increased unbelievably. However, most of them are confirmed 'chuck hunters who rarely kill a crow. They

may shoot an occasional one during the summer, but it is usually an incidental shot, one taken when presented provided the noise won't ruin the chance at the favored whistle-pig. Since most of the men I hunt with regularly feel the other way about it, preferring a shot at a crow to one at a 'chuck, I decided to ask some of these 'chuck hunters why they put away their rifles as soon as autumn came, disregarding the fine winter shooting at crows. Their reasons were simple and most gave the same ones. First, it's harder to get a shot at a crow; second, crows are harder to hit.

Anyone who has hunted both of these varmints will agree wholeheartedly with these opinions. About the only way one can get near a crow is to call them into a blind. This method provides some fast and fancy shooting for the smooth-bore fans but trying to hit a diving, whirling, screeching blob of black feathers with a thirteen pound, scope-sighted rifle is pretty much out of the question. If our hunting is to be done with a rifle it requires a different method.

In this area we have found the best way of hunting crows is simply to drive around the back roads and shoot when a target appears. However, this isn't as simple as it sounds. To begin with, the land on which we see the crow invariably belongs to some farmer and his permission is

needed before we may shoot. But if we go to the house to ask, the crow will be gone before we return. Therefore, the first thing to do is get acquainted with the landowners in your hunting area. Know them well enough that you can take shots when they're presented, so if a farmer hears the shot and looks up he'll recognize your car and know who it is. Also, form the habit of never shooting without a safe backstop. Farmers are understandably fussy about high-velocity bullets wandering among a herd of registered Guernseys or poking holes through the milk house. Crows will often be seen sitting on a dead tree or on a fence post on the horizon. These shots should be passed up as they will let the bullet go beyond any safe backstop. It's easy to aim up in the air, but don't forget—that bullet is going to come down somewhere.

Occasionally someone will ask why we kill crows. One answer is that we do it, or try to do it, because it is difficult. It's the misses that keep it from becoming boring. No two shots are exactly alike: the range, wind, angle and position are constant variables. There are other reasons. The crow may be a very destructive bird, both to farmer's crops and to small game such as young rabbits, grouse and pheasants. They often destroy countless

ducks and songbirds by eating their eggs. Therefore, killing a crow can be a definite service to conservation.

Probably the best time of year to hunt crows with a rifle is during the winter, especially when there is snow on the ground. Under these conditions they may often be seen at very long range and the shooter has time to plan an approach that will put him within range without being seen. If the weather is very cold crows are more reluctant to fly than in warm weather. With the temperature down toward zero they often sit in plain view while the hunter makes his preparations and eases off a shot. They seem to shatter like icicles when hit at these times. If the shot is a miss they will often sit down again in a short distance allowing another try.

Usually crow shooting is better in the morning than later. They are scattered then, searching for food, and are more apt to be found in small groups or singles and often a shot at each group may be obtained. However, when large flocks are seen a shot or two will frighten the whole crow population and they depart for places unknown. Crows become very gun shy after being shot at and missed or after having another crow killed within a few feet of them. Can't blame 'em too much for this!

Many times a crow will sit motionless while the hunter stops the car, drags the heavy rifle out to a solid position, loads it, takes aim and begins to put pressure on the trigger—then flies before the trigger breaks. When this frustrating experience happens repeatedly it gives the shooter an urge to smash the rifle and scope over the nearest boulder and take up golf. There is probably no way of eliminating this entirely, but there is a better chance of getting a shot if the car is stopped *before* coming up to a crow. They almost invariably fly if a car stops after passing them, even if they are several hun-



dred yards back in a field. If the same area is hunted often they will soon learn to recognize the car and will fly whenever it appears. If several men hunt together it is advisable to take turns with the cars.

A crow has a small vital area, not nearly as large as his black feathers make him appear, and perhaps only 25% as large as a 'chuck's. This, coupled with his extreme wariness, makes him an unusually difficult target. After shooting at them with quite a few cartridges ranging from the .22 rim-fires to the .300 Magnum, some conclusions regarding the proper outfit have been reached. Obviously no single cartridge will be ideal for all conditions. We must consider the ranges over which we will hunt, the type of country, and the people living in the area.

In the farming country typical of much of Pennsylvania the first characteristic of the cartridge to be considered is its report or noise. This is often overlooked by the shooter who gets carried away by the awesome ballistics of some wildcat which supposedly gives a .22 caliber jacketed bullet 5000 feet per second muzzle velocity. This kind of case looks wonderful on paper and might be just the ticket in the middle of Wyoming where there are thousands of acres in every back yard, but around here it just doesn't fit in. Most of us have to be content with something smaller.

Most crows will be killed between the ranges of 125 and 250 yards. They're just too small to be hit beyond this range with any regularity and too wild to be approached closer unless they're hunted in the woods. In this case a good stalker may obtain shots which can be handled by a good .22 rim fire with long rifle hollow point ammunition. A good 4 power scope would be ideal under these conditions, permitting accurate aim in the shadowy trees. This type of hunting is excellent training for the young hunter, teaching him the value of close observation, use of conceal-



ment, and the absolute need of placing the first shot where it belongs.

In crow shooting, we need all the accuracy obtainable. If a custom rifle is being built for this purpose, it is wise to specify a fairly heavy barrel although a bull barrel is not necessary. A heavy barrel is almost always more accurate, less apt to vary point of impact under the different positions assumed in the field. It is always easier to hold on a small target such as a crow sitting on a broken cornstalk two hundred yards away. When it is necessary to fight a light weight rifle to hold it steady, the heavy barrel lies dead.

Maybe, after reading this, some of you may get into the crow hunting game. When you finally get that rifle and scope, with the special lot of ammo that puts most of its bullets in one ragged hole at a hundred yards; when everything is tuned to perfection and you lay in a fence row studying a crow across a snow covered field; when the center dot shows sharp and black, even against his black feathers, and the wind is cold on your face and your eyes water a little, but you *know* you're going to hit him, and then you touch the trigger and he explodes in a burst of feathers . . . then you know you're a rifleman!



The Hunt

WITH the advent of crisp, brisk weather, comes the delightful preparation of an admired ensemble. Not one created by Dior, or Channel, however, but one resembling the rear view of an up-right grizzly wearing a red shawl. This is the fashion, so cherished by my spouse, as well as all other big-game hunters.

On the eve of buck season, he will rig himself with all the baggy splendor of his outfit, which consists of two of everything. Upon his heavily-laden frame he will heap pounds of grotesque-looking equipment. Most of these he will place strategically, for the sake of convenience, while others, like his coffee thermos, will bulge conspicuously from his flaming-red parka.

At the sound of the horn blasting in the night, he will stand, subtle in his pose, and surrender one solitary kiss upon my cheek. He will prefer his masculinity uncluttered with feminine concern.

Excitement will mount as the feeling of conquest trickles through his veins. Driving over the highways, he will dream, and those dreams will gather momentum with each crunching step in the snow-cruised mountain edges.

An invisible darkness will envelop the early-morning search for a post. He will have included in his group an authority on protocol, usually the



the Huntress

by Ruth Rihn

senior huntsman, who will nod each man to a vantage point.

With rifles loaded and waiting, the men will sniff in anticipation. There will be rapt attention. The woods will echo a deadening silence. Daybreak will flow through the tall, dense forest. Tenseness will prevail. Each man will remain quietly primed for the first move.

A twig will crackle in the stillness. All heads will turn. Guns will be aimed. Seconds will tick off into an eternity. Suddenly, from the brush, a startled hare will race across a clearing. The hunters will relax and chuckle over their first encounter.

From off in the mountainous terrain shooting will be heard. The firing will get closer. Then it will sound in all directions. Mixed emotions will sweep over the group. Confidence will follow the fleeting fear of a stray as the gunfire subsides.

He will wait quietly at his post again. This time with taut nerves and every leaf will become a quarry. Time will drag on.

Several yards away a vision will emerge. There will be a momentary hesitation, just to make sure. The rifle will be leveled, muscles will flex, and the finger will pull the trigger. It will be a clean-cut shot. The buck will scurry, then fall within tolerable retrieving distance.

From everywhere friends will materialize to glory in the kill. Happy congratulations will be offered in the universal hunting language, "geez, look at that!" He will swell with the pride of a peacock.

He will walk triumphantly through the door. Neighbors will flock in and out, regardless of the hour, to gaze upon his prize. He will re-live his experience with each one.

I will hear the story a hundred times, and dine on venison prepared in a hundred different ways. He will say it is the best meat he has ever eaten.

Yes, I will have his one forked antler mounted just as I did his full rack eleven years ago.





FIELD NOTES



'Twas The Month Before Christmas

McKEAN COUNTY—On November 25, 1957, first day of bear season, I stopped at a filling station in Kane to get gas. The attendant related the following incident. He had seen two deer cross the road by his station and go into the front yard of a house belonging to Reid Dyne, 408 N. Fraley Street, Kane, Pa. The deer were browsing there and one went up onto the front steps of the house while the second stood beside the steps. Something scared the deer and the one on the steps stuck his head through the storm window on the door, fell down into the yard and then got up and ran away with his companion. The people in the house came to look and discovered the broken glass but did not know what caused the breakage. While I was at the filling station the attendant called the people concerned and advised them what had happened to their door.—District Game Protector Robert H. Myers, Mt. Jewett.

Gas-Out

CLINTON COUNTY—While on patrol with Fish Warden Wilson on the Coudersport Pike in Clinton County on the night of November 11, at 1 a.m. in the morning, we heard a shot. Taking out after the culprits we overcame them stopped in the middle of the road out of gas. They had shot at a deer and missed it, then took off in their car, went about 25 yards when the car coughed, spit and quit. They said that if they had not run out of gas we would never have caught them. So this was one of the few times a Game Protector had the luck on his side.—District Game Protector Ivan L. Dodd, Lock Haven.

Don't Fence Me In

PERRY COUNTY—This seems to be a great year for deer damage complaints and they seem to run in all sorts of sizes and shapes. One of the more numerous is that the deer have been consistent in the destruction of electric fences. Most farmers have to make a regular morning patrol of their temporary fences before turning their cattle out. I had this proven to me quite dramatically the other night when a local car hit and killed a large six point buck. The car wasn't damaged. It just skidded over the buck. And around the antlers of the buck was a piece of copper wire of the type used in making a temporary fence. It was wrapped around the antlers five times and in numerous knots and from the looks of things there must of sure been a commotion there for a while.—District Game Protector Russell M. Meyer, Blain.





Playful Pheasant

CLARION COUNTY—During the small game season, Bob McManigle, of Clarion, went hunting and got one pheasant and one rabbit. He had them in his hunting coat for about two hours. When he got home he laid them on a newspaper to clean them. He turned around to get his knife and the pheasant took off through a neighbor's back yard, Bob right after it.—District Game Protector W. D. Denton, Clarion.

Fulton Feline

FULTON COUNTY—During the past season, two wildcats have been killed in Fulton County. This is my fifth season here and to the best of my knowledge these are the first cats killed. One of the two was a large tom. The other was a very small female kitten, weighing perhaps two pounds. I am no authority on wildcats but I thought this exceptionally small for an October cat.—District Game Protector Carl E. Jarrett, McConnellsburg.

Poor Sportsmanship

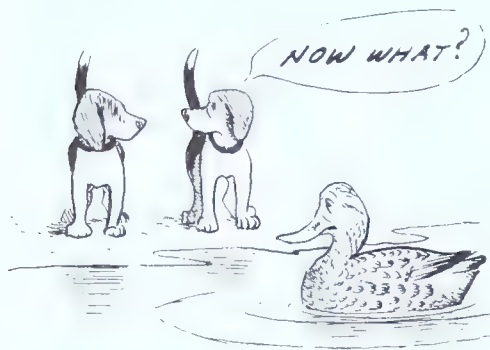
HUNTINGDON COUNTY—That man can be "lower than a snakes belly" was once again demonstrated not just to himself but to several thousand spectators. On November 28

I was informed that during a football game between Huntingdon and Lewistown at Lewistown one of the Huntingdon linemen captured a cottontail rabbit which had been scampering around over the field looking for an exit. He then deliberately bashed its brains out on one of the metal line posts. All this occurred before several thousand fans who then became more interested in the murder than the game. Had Lewistown not been so far ahead at the time a possible riot could have developed. Needless to say the culprit paid the penalty for his thoughtlessness.—District Game Protector Richard Furry, Huntingdon.

Ring-necked Duck

VENANGO COUNTY—While stocking pheasants near Sugarcreek one only went a few feet and dropped into the creek. I expected it to swim over to the bank and then fly away, as I knew they could swim. Instead it beat its wings down on the water and took off straight up like some of the ducks. This is the first I knew they could take off from water in that way.—District Game Protector Clyde W. Decker, Franklin.





Shore Leave

YORK COUNTY—One Saturday morning during November Deputy Silar and I checked a rabbit hunter in the vicinity of the River whose bag included a rabbit, one squirrel, one pheasant and two black ducks. This was a foggy morning in some sections and I thought it would be a good duck day generally. Later in the day I had an opportunity to check several duck boats coming off the River. Both boats were empty, and I couldn't resist suggesting they had better go rabbit hunting if they wanted to kill any ducks.—District Game Protector D. H. Fackler, Windsor.

On The Safe Side

MONROE COUNTY—Jacob Kintz, Service Forester for the Delaware District, Dept. of Forests and Waters, reported watching some deer cross Route 402, near Marshalls Creek. The three deer walked out to the middle of the road, then coming to the painted white lines in the center jumped in the air as if jumping a fence to get over the painted line. Kintz thought when the first one did this it was just jumping for the exercise, but as each deer came to the line and jumped over he came to the conclusion that Monroe County deer aren't taking any chances.—District Game Protector John H. Doebling East Stroudsburg.

Hotter Than A Snake's Belly

LACKAWANNA COUNTY—Scoutmaster Ed Williams of Moosic related an interesting experience which happened to him this past summer. He was in the Mehoopany area on a very hot summer day when he saw two black snakes start to wriggle directly across the scorching hot paved highway. As he watched them attempt to cross, he noticed their efforts becoming weaker and weaker and finally they could go no further. He picked up both snakes and placed them in a shaded area. Eventually one of the snakes revived; however the other was not so fortunate and died. A lecturer from the Bronx Museum had told Mr. Williams that the maximum temperature which a snake could endure for any length of time was 100 degrees. Apparently the pavement was much higher than that temperature and the snakes had succumbed to it very quickly.—District Game Protector Stempen A. Kish, Avoca.

Of Honesty And Respect

GREENE COUNTY—On November 27, 1957 I received a call from a lady who lives in Carmichaels, Pa., (will not mention her name) who wished to see me as soon as possible. I immediately went to her home and she told me this story. Her son had been hunting and had shot a hen pheasant by mistake. She said that he had been given proper instructions on the sport of hunting by his father and that he was to pay for his mistake. The boy paid his quarter penalty of \$6.25 out of money he had received from his grandad for Christmas money. This goes to prove that there are still some people in this world of ours who treat and look at all laws of our great land with respect.—District Game Protector Richard L. Graham, Carmichaels.

Sit And Wait

ERIE COUNTY—Deputy Game Protector Ted Janosik reported checking a hunter using a new easy method to bag rabbits. While checking in the field Ted noticed the hunter sitting on a stump in good rabbit cover located in an area where there were plenty of holes or dens. The hunter fired his gun once and just remained on the stump. About fifteen minutes later he raised his gun, fired and continued to sit on the stump. After the third performance of this kind Ted's curiosity got the better of him and he approached the hunter to check his license and find what the shooting was all about. The nimrod told Ted he found it very good hunting to just sit by a number of holes in a briar patch. "Every once in a while a rabbit comes out to look around and I just collect him." To prove his point he walked over to a thicket and picked up three rabbits.—District Game Protector Elmer Simpson, Erie.

All In The Family

LYCOMING COUNTY—Early during the month of October Mr. Floyd Sechrist, caretaker of the Jersey Shore Water Co., informed me that a bear was making frequent visits to his home and during the night killed one of his tame rabbits. A live bear trap was set in the hope of removing the nuisance. A few nights later Mr. Sechrist called again and said something was in the trap. When I arrived on the scene there was a bear cub in the live trap bawling for all he was worth trying to get out, and an old large bear and another cub tearing at the trap trying to get in. The old bear was very reluctant to leave the trap and her cub. I released the cub while the old bear watched from a short distance away and all three bears ran up a nearby hillside and haven't been heard from since.—District Game Protector Michael Evancho, Jersey Shore.

Three For The Money

CLINTON COUNTY—It is unusual when one man kills a bear three years in a row. Most men would settle for one in a lifetime. But most unusual was that the bear this year was a rare and pretty cinnamon bear. The above feat was performed by Raymond Reed, Springdale, Penna., in his three years of bear hunting in Grugan Township, Clinton County.—District Game Protector Charles F. Keiper, Renovo.

One Man's Meat . . .

ELK COUNTY—While checking hunters in the Benezette area on Armistice Day, I contacted a hunter who was finally convinced that he was going to quit hunting. He informed me that there was not enough game to bother any more. After checking him I went about 300 yards down the road and met another hunter standing beside his car. When I asked him if he had done any good, he got a big grin on his face and said that this was the best year for hunting he had seen in a long time. He opened his trunk and showed me a nice big hen turkey, 2 big rabbits and a big ringneck rooster that had wandered into this mountainous area for some reason or another. He was certainly pleased with his day's results.—Fred H. Servey, District Game Protector, St. Marys.





Gone Gobblers

CLEARFIELD COUNTY—During the fall and up until the opening day of wild turkey season a flock of 14 turkeys had been observed and come quite close to the farm buildings on a farm located in Union Township, Clearfield County. On the opening day of turkey season those turkeys just faded out of the picture and no one to my knowledge contacted the flock. On November 27, the turkeys appeared on the farm they had vacated and every one is present and accounted for—a total 14. Apparently that flock of turkeys never lost a feather during the season.—District Game Protector Claude B. Kelsey, Troutville.

Over Confident Cat

MERCER COUNTY—One Mr. Powell of R. D. No. 2, West Middlesex, related this story to me. He was looking out of his kitchen window when he saw a cat creeping up on two ringneck cockbirds. When the cat got close enough, he charged one of the cockbirds and pounced on it. The second bird, being more than cocky, pounced on the cat and started flogging it. The cat readily conceded defeat and hurriedly ran for home with both the cockbirds in close pursuit.—District Game Protector Art Biondi, Mercer.

Dog Fight Fatality

SOMERSET COUNTY—On the first day of rabbit season an unusual accident happened on the Fred Darr farm near Friedens. Two hunting parties met there and their beagle dogs started to fight. The owner of one of the dogs layed his gun down to separate the canines and in the scuffle his dog happened to step on the trigger of the gun discharging it and killing the other dog.—District Game Protector E. W. Cox, Somerset.

THE TALE OF THE DEAR

It is common knowledge among both hunter and wife alike that a great many sports-minded stalkers of the wary whitetail venture forth each December just to get away from it all. I (who am one of the above) was firmly convinced of this when I discovered that a fellow-hunter went further in search for freedom during the 1957 Pennsylvania deer season than I would ever dare.

While hunting in the region of Potter County, known as the Abbott Branch, for the elusive big game animal during the antlerless season, I found (in addition to my quarry) a very shiny, circular object lying in the scrub oak. Upon reaching down, I was startled to discover it to be a golden wedding band, properly initialed and all. I would be happy to return the band of gold to whomever it might belong, provided of course the tall tale to the dear wife will not be too embarrassing. The inscription on the inside of the band reads: "N.J.G. to P.O.Y. 6-26-54."—Newell A. Shireman, 202 N. Catherine Street, Middletown.



CONSERVATION NEWS

COMMISSION ELECTS OFFICERS, ANNOUNCES TENTATIVE OPENING DATES FOR 1958 GAME AND WATERFOWL SEASONS

The Pennsylvania Game Commission, meeting in Harrisburg on January 3rd, re-elected its 1957 officers to serve in the same positions during 1958. They are: President—C. Elwood Huffman, of Marshalls Creek; Vice-President—Andrew C. Long, of Shamokin; and Secretary—Dewey H. Miller, of Bedford.

Following the practice of the past several years, the Commission also set *tentative* opening dates for the 1958 hunting seasons. *Definite opening dates* will not be set until complete information is available on the winter survival and spring reproduction of Pennsylvania game birds and animals. Official hunting and trapping seasons, along with bag limits for each species, will not be established until the July meeting of the Commission.

Tentative 1958 Opening Dates

Small Game: Saturday, October 25. This year, the season on all small up-

land game except snowshoe hares will open on the same date. The upland birds and animals are: wild turkeys; ruffed grouse; gray, black and fox squirrels; cottontail rabbits; ring-necked pheasants; and bobwhite quail.

Separate Archers' Deer Season: Saturday, October 4.

Antlered Deer: Monday, December 1.

Bears: Monday, November 24.

Snowshoe Hares: Saturday, December 27.

The Commission named the following dates for migratory game birds (provided Federal approval is granted):

Rails and Gallinules: Monday, September 1.

Doves: Wednesday, September 10.

Ducks, Geese, Coots, Brant, Woodcock and Jacksnipe: Wednesday, October 15.

GAME COMMISSION OFFICERS AND MEMBERS posed for this group portrait with their new Executive Director during their meeting of January 3. Left to right seated: Andrew C. Long, Vice-President; C. Elwood Huffman, President; Dewey H. Miller, Secretary; H. L. Buchanan. Standing: James A. Thompson, Col. Nicholas Biddle, Executive Director Golden, John C. Herman, Deputy Attorney John Sullivan, Russell M. Lucas.

Harrisburg Patriot-News Photo.





PGC Photo by Batcheler.

TRANSFER OF TITLE to new Game Lands in Cumberland County took place in Harrisburg on January 7 when Colonel Iverson, Deputy Commanding Officer of Carlisle Barracks, turned over property deed to M. J. Golden, right, Executive Director of the Game Commission.

COMMISSION ACCEPTS ARMY GRANT OF CUMBERLAND COUNTY GAME LANDS

M. J. Golden, newly appointed Executive Director of the Pennsylvania Game Commission, reports that the Commonwealth of Pennsylvania, through the Game Commission, recently acquired the 786 acre United States Government property known as the Mountain Maneuver Area of the Carlisle Barracks. This holding is located approximately five and one-half miles north of Carlisle in North Middleton Township, Cumberland County, Pennsylvania.

The United States Government, after declaring the Mountain Maneuver Area surplus to Federal needs and under advice that the United States Fish and Wildlife Service was not interested in the site for its program, deeded the surface rights to the Pennsylvania Game Commission with provisions that the tract be managed for wildlife. The Government reserves oil, gas and mineral rights and stipulates that in the event the property is no longer used for wildlife conservation

or it is needed for national defense, that title to it shall revert to the United States. Employees of the Commission are enthusiastic over the potential development possibilities on this new tract and expect considerable improvement in hunting conditions after plans are approved and the area placed under an intensive management program.

Considering there are several marginal farms totaling over 400 acres, there is every reason to expect that 250 acres can be planted on a rotation basis by share-crop farmers. As fields are contoured or planted in strips, the game habitat will improve with the introduction of grain crops, clovers and grasses required by all species of wildlife. Border cuttings along established fields and gullies will increase game food and cover in the form of sprout growth and reproduce native shrubs and vines. Cottontail rabbits, ringneck pheasants, bobwhite quail, grouse, squirrel and

deer, already on the area, will respond under these management practices.

Evergreen trees, shrubs and vines grown at the Commission's Howard Nursery will be planted to revegetate rock outcrops, steep field slopes and on strips where it is desirable to improve food and cover conditions for wildlife within or near crop land.

Over 200 acres of woodland on the south slope of Blue Mountain, covered with mixed oak, maple, yellow poplar, black gum, yellow pine and locust, averaging over six inches in diameter, provides food for deer, grouse and squirrel. Periodic cuttings throughout this portion of the tract will improve cover for these wildlife species.

Those acquainted with this tract realize its potentialities. Other sportsmen may wish to check the location and keep pace with developments as the wildlife management program progresses. Clubs interested in developing their own areas may use many of the applied practices.

The Commission considers this mixed farm woodland property a welcome addition to its holdings, particularly since it is located near large centers of human populations and where open hunting land is highly desirable. Certainly every citizen interested in the outdoors and conservation as a whole, should appreciate the value of this fine addition to State Game Lands.

PAYMENT OF BOUNTIES—After a full discussion of the predator situation, and upon motion made, seconded and approved, the following Resolution was adopted:

RESOLUTION

WHEREAS, After giving due consideration to the present predator population;

THEREFORE, BE IT RESOLVED, That the Pennsylvania Game Commission, acting under the power and authority vested in it by the provisions of Article XI, Section 1101 of the Game Law, be resolution adopted this 3rd day of January, 1958, hereby directs that for the fiscal year beginning June 1, 1958, the bounty payments authorized for the birds and animals enumerated below, if killed in a wild state in any County of the Commonwealth during the period specified and presented in the manner and under the conditions stipulated in the Act aforesaid, shall be as follows:

Gray Fox—\$4.00 for each gray fox.

Red Fox—\$4.00 for each red fox.
Great Horned Owl—\$5.00 for each great horned owl, adult or fledgling, killed during all months, except that such bounty on great horned owls be discontinued with the opening date of small game season, whatever it may be, and remain so through November and December.

BE IT FURTHER RESOLVED, That the foregoing Resolution shall be duly published in accordance with Section 1102 of Article XI of the Act aforesaid in the February and March issues of the PENNSYLVANIA GAME NEWS, also to be brought to the attention of the public by news release and other sources of public information; and

BE IT FURTHER RESOLVED, That the Executive Director is hereby authorized and directed to certify the foregoing as an act of the Pennsylvania Game Commission.

M. J. Golden
Executive Director
Pennsylvania Game Commission



PGC Photo by Batcheler.

COMMISSION EXHIBIT at Pennsylvania Farm Show emphasized importance of Commonwealth's fur resource. A display of live and mounted predators and furbearers was featured, along with an exhibit of trapping equipment and methods. The colorful and educational presentation was enthusiastically received by thousands of visitors to Harrisburg during mid-January.

Pittsburgh Host This Month To North American Game Breeders

Pennsylvania's "Steel City" will serve as host this month to the Annual Convention of the North American Game Breeders Association. An expected attendance of 150 or more members and their wives will gather at the Penn-Sheraton Hotel on February 9, representing commercial game breeders from most of the 48 states. The present board of officers is headed by Chairman Don MacFarlane, of Janesville, Wisconsin, and Samuel G. McCluney, President and Chairman of the Executive Committee, of Warrensburg, Missouri. The Board of Directors includes two Pennsylvanians—Ralph Britt, of Harrisburg, and Fred Turrill, of Laughlintown.

Registration for the Convention will start at 8:00 a.m. Sunday, February 9. The program will be formally opened at 10:00 a.m., Monday with speakers on that day including

Harry Kauffman, Head of Poultry Extension, Pennsylvania State University; Dr. Oliver H. Hewitt, Professor of Wildlife Management, Cornell University; Robert Parlamen, Conservation Information Assistant, Pennsylvania Game Commission; Professor C. M. Kirkpatrick, Department of Forestry and Conservation, Purdue University; John D. Findlay, Chief, Branch of Game Management, U.S. Fish and Wildlife Service.

The Annual Banquet will be held Monday evening with Robert E. Latimer, Waterfowl Management Agent, Pennsylvania Game Commission as principal speaker. Tuesday the Convention will be addressed by Charley Dickey, Sportsmen's Service Bureau, Greenwood, South Carolina; Dr. Lee O. Curtin, of the McMillen Feed Mills, Fort Wayne, Indiana; Roger Latham, Outdoor Editor, "Pittsburgh Press." Program Chairman for the Convention is Ralph Britt, Asst. Chief of Propagation, Pennsylvania Game Commission.

Deputies Are The Game Protector's Right Arm

An armed criminal who had evaded police road blocks in southeastern Pennsylvania was recently captured by a Deputy Game Protector who was performing routine hunting season duties. This is but one of a number of cases in which Game Commission Deputies have assisted State or Federal police authorities to locate or apprehend a wanted man. Such official actions point up the fact the Commission's trained field officers, salaried and non-salaried, safeguard not only wildlife but property and human lives. In times past they have lent valuable assistance, sometimes risked personal safety, when their woodsmanship or knowledge of hide-out spots in remote areas was helpful to law enforcement agencies charged with handling major crime.

Once a man determines he has the desire and aptitude to become a Deputy Game Protector he makes application to the District Game Protector in his locality. To qualify he must be at least 21 years of age, of good character and his assistance in his community must be considered necessary. If the applicant passes the written examination he is officially commissioned. Thereafter his duties are supervised by the District Game Protector. The newly appointed Deputy is taught law enforcement procedure, public relations and numerous other phases of conservation work before assuming any field duty. He and other Deputies are periodically instructed by the District Game Protector and other qualified personnel in order to be current on Game Law changes and other pertinent matters. The Game Protector makes a special effort to take a new Deputy along on patrols and various other duties to acquaint him with the Game Commission's activities and procedures. The community expects a Deputy Game Protector to be well

informed on wildlife and the Game Commission's game management program.

Deputies meet most sportsmen during hunting season, when Game Law enforcement is the pressing duty. But they are active throughout the year, often performing important services unknown to the public. For example: when a deer is reported road killed or a person has a wildlife problem, the Deputy who lives nearby is often the man who goes into action. The Game Protector is thereby saved much time he can advantageously apply to other duties.

The loyalty and continued interest displayed by many long-time Deputy Game Protectors constitutes an inspiring record. By the end of this year 83 of these officers will have held a commission for 20 or more years. Of this number 36 will have had a 25 to 30 year period of continuous service. On December 31st 3 men may boast they have served 34 years as a Deputy. These and many others are capable men who have proven willing, dependable, high-type public servants. They ask, and receive, little or no pay for their contribution. To them the satisfaction gained from helping to manage Pennsylvania's wildlife so that hunting, trapping and the enjoyment of the out-of-doors may be perpetuated is pay sufficient.

LONGEST SERVICE in the ranks of Pennsylvania's Deputy Game Protectors is held by Roger L. Franke, of Millersburg. He was first appointed on August 29, 1923 and has served faithfully since.



Commission Offers Exceptional Trapping Book

"Pennsylvania Trapping And Predator Control Methods," a new 72-page booklet, amply illustrated with photos and drawings, has just been published by the Game Commission. The author is Paul Failor, Supervisor of the Commission's Predator Control Section. Failor is widely recognized as an expert trapper, trapping instructor and fur specialist.

In this manual Failor tells how to trap any wild predator or fur animal in Pennsylvania. In the handbook are found, also, instructions for making lure, preparing bait, and properly handling the catch.

Many natural history facts about birds and animals found in the Commonwealth are contained in the work. For example, the incubation and gestation periods of game birds and animals are given, plus the number of eggs or young per nest or litter and the average weights of adults.

This long-needed guide will provide novice trappers much information that will help them to successfully harvest predators and furbearers. Even experienced trappers will find pointers and little known facts of value in the text.

As in no other booklet of its kind, the author includes instructions on the fascinating sports of crow and great horned owl calling.

Information on trapping laws and the rules and regulations that should be known and observed by anyone who runs a trap line in Pennsylvania are included for extra measure.

The price of this exceptional trapping and predator control booklet is 25 cents. It may be obtained from the Harrisburg office of the Game Commission or any of the agency's Field Division offices.

Trapping Season Opens on Pennsylvania's Most Valuable Furbearer

The 1958 Pennsylvania beaver season will open at 7 a.m. on February 15 and close at 12 noon on March 15. The "broadtail," largest furbearer in the United States, is eagerly sought by many Keystone State trappers and is generally considered the "prize catch" on any trap-line. In the previous three seasons the beaver harvest has been 3,176 in 1955; 2,973 in 1956; and 2,913 in 1957.

Each resident trapper may set, tend or operate 10 traps only during the Pennsylvania beaver season. Traps must be tagged with metal name tags and such tags must show above the ice or water line to permit easy inspection without disturbance to traps. Traps may not be set on the structure of any beaver dam or house, or within 25 feet of the water line on the structure of either.

Official seals must be affixed to beaver pelts by Pennsylvania's District Game Protectors before they may be sold or otherwise disposed of. Skins must be presented to these officers within 10 days after the season closes. Successful trappers should present the pelts to the game protector in the district or county where the beavers were trapped.

On publicly-owned land no trapping is permitted on dams posted by the Game Commission nor is trapping permitted on water areas privately owned where posting has been done at the request or by the consent of the landowners concerned. Such beaver colonies are given this protection where their numbers are low in order to ensure sufficient brood stock for later years.

Gavin Appointed to Migratory Bird Conservation Commission

Congressman Leon H. Gavin of Pennsylvania has been appointed to the Migratory Bird Conservation Commission. The appointment, announced by Speaker of the House Sam Rayburn, is another honor for the Pennsylvanian who, in 1954, was given a special award by several of the country's major conservation organizations for his role in Congress in furthering the protection and wise use of the nation's natural resources, according to the Wildlife Management Institute.

Established in 1929 to implement the migratory bird treaty with Great Britain for the preservation and restoration of migratory birds, the Commission passes on the creation of new national wildlife refuges as well as lands obtained for existing units.



BOY AND HIS FIRST BUCK pose proudly the first day of the 1957 antlered deer season. Patrick Breniman, 12, son of Mr. & Mrs. Gene C. Breniman of Shippenville, Clarion County, downed this fine 8-point buck at 8:00 a.m. opening day while hunting with his father on State Game Lands No. 72 in Paint Township.

POTTER COUNTY'S PROOF that there are a few bucks left on this famous deer range was in evidence at the Wagner-Brothers Camp near Cross Forks during the 1957 antlered deer season. Although reports indicate this region is not producing as many or as heavy-racked deer as in former years, every member of this camp downed a fine trophy early in December. Left to right: C. K. Gerlach, J. K. Wagner, Sr., J. K. Wagner, Jr., N. L. Wagner, M. K. Wagner, and C. K. Gerlach, Jr. The young female admirer is Connie Wagner, daughter of M. K. Wagner.

PGC Photo by Batcheler.





J. Hubert Larkin Photo.

BABY WILDCAT was "saved" in a cat-dog fight during the summer of 1954. John Webster, of Narber rescued the young animal when his dog found and attacked it near Elk Run while he was returning from a fishing trip. True to its nature, however, the animal spent only one night in captivity. Soon after it posed for its picture with Harry E. Webster, it escaped and returned to the wild.

COCKER SPANIEL—FOUND BUT NOT HOME

A cocker spaniel was found in Clinton County during the second week of the deer season. He had been roaming the woods for at least two days and was located on Grogan Hollow Road in Noyes Township. The owner of this dog may claim him by providing proof of ownership and contacting: Clayton W. Matthew, R. D. 2, Fleetwood, Pa. Phone: 4087.

Bobcat—Saint or Sinner?

The bobcat is neither a "saint nor a sinner" according to a study conducted in Alabama, the Wildlife Management Institute reports. The stomach contents of 145 bobcats collected between 1947 and 1954 were examined by biologists of the Alabama Department of Conservation and the Alabama Cooperative Wildlife Research Unit to provide a clue to the cats' eating habits.

The findings were that "rabbits provided 65.1 per cent of the volume of food for bobcats during the year. The rabbit was the bulk of the food for the cat in every month of the year.

"Deer provided 14.5 per cent of the food. Deer are eaten mostly in January and February. No deer meat was found in bobcats' stomachs from May through August. Most of the deer eaten by the bobcat may consist of dead or wounded animals, since this food item was usually consumed during and following the hunting season.

"Contrary to expectations, wild turkeys was found in only one stomach. Quail were found in two stomachs and made up less than 2 per cent of the diet. Domestic chickens were found in three stomachs, for a total percentage of 3.5. Remains of one mallard duck, several song birds, and one hawk were found. Squirrels made up 4.3 per cent of the bobcats' food and were eaten most frequently in December, January, and February. Rodents, including rats and mice, made up 5 per cent of the diet. These were eaten in the greatest numbers from June through August. Raccoons and possums constituted 4.3 per cent of the diet."

"These eating habits," authors James R. Davis and Arnold O. Haugen concluded, "put the bobcat in both good and bad brackets. Certainly, he is not as 'black' as often painted."

Fur Trapping Still Adversely Affected by Fashion Demands

Mink and muskrat for milady's fur coat continue to be the important items sought from American trap lines, according to latest compilation of fur catch figures by the Fish and Wildlife Service of the Department of the Interior.

However, fur trapping in the 1955-56 season generally returned poor profits to those who plied that trade because fashion was still reluctant to accept most of the long-haired furs. At present efforts to revive the demand for the neglected furs are meeting with success and there is hope that this condition may soon be corrected.

The muskrat continues to lead the field because of its numbers and because it is acceptable to those who buy fur garments. More than five and a half million of these animals were taken in 1956, about 400,000 more than in 1955.

Louisiana, with 57,142 mink pelts and 1.8 million muskrat skins, led the nation in production. Minnesota was second in mink production with 47,880. Wisconsin was third in mink

with 38,513 and second in muskrats with 641,955. Total mink harvest was approximately 349,000 skins, about 50,000 less than 1955.

The raccoon harvest of 978,000 was only slightly below the 1955 figure. The opossum take was down a little but still topped a quarter of a million. The beaver catch was close to 180,000, a little under the figure for 1955.

The gray timber wolf, as distinguished from the common coyote or brush wolf, still shows up in the trap lines with Alaska harvesting 930; Michigan 24; New Mexico trappers took the most bobcats, 2,075, with Georgia second with 1,500. The total take was 8,292.

Other figures for 1956 fur harvesting are: Badger, 3,880; bassarisk (ring-tailed cat), 10,892; lynx, 3,204; marten, 5,763; otter, 12,927; skunk, 116,858; squirrel, 56,004; weasel, 96,493; wolverine, 356.

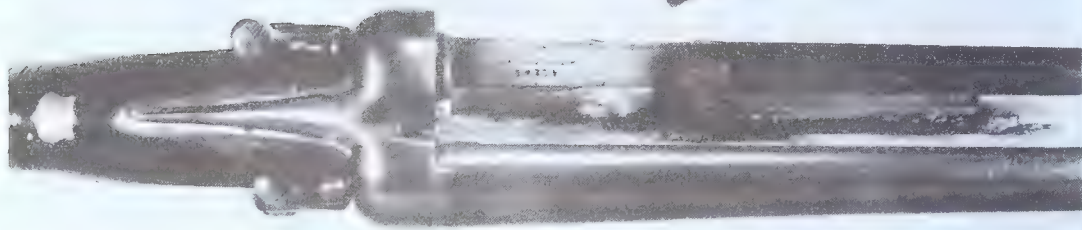
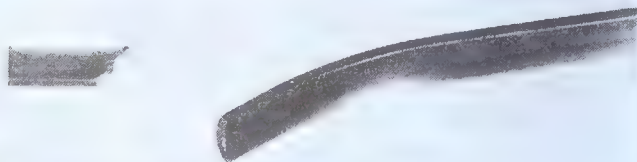
The fur seal harvest for 1956 was 122,826, nearly twice the usual number. This, however, is not a trap line activity but an annual harvest responsibility conducted by the United States Fish and Wildlife Service on the Pribilof Islands off Alaska.

BIRD'S-EYE VIEW of a hunters' "training camp" is this aerial photo of the Palmyra Sportsmen's Club. The Lebanon County organization is presently completing a modern indoor rifle range, has a 28-target field course for archery, and complete outdoor rifle and shotgun firing facilities.





FIGURE 1 - A section of a Damascus barrel showing the characteristic wavy pattern.



Damascus Barrel Shotguns

By Bill Clede

GRANDAD'S old shotgun hung over the mantle for many years and it was a beautiful gun to see. Its barrel seemed to be etched with a spiral design. Gramps had always taken the best of care of that gun; but now it may well be a death-trap.

Damascus steel was once highly desired for sword blades and many old guns were made with Damascus barrels. Confidence in this type of steel was once so great that cheap gun barrels were sometimes painted or etched with acid to give them the appearance of true Damascus.

They were made by braiding strips of iron and steel and tightly twisting this around a mandrel. Through a welding process with repeated light hammering the twisted braid was joined into a solid mass. The mandrel was then bored out and the barrel polished inside and out. Cheap Damascus barrels containing mostly iron were often hastily produced to meet a low price. Since

they are actually a continuous mass of welds only the greatest care and skill turned out a good barrel.

Today's modern smokeless powders develop higher temperatures and greater pressures than the old black powder for which these barrels were designed. One imperfect weld in a Damascus barrel, and most of them were medium or low grade, creates a weak spot that may well let go on the next shot fired. Of course it might not, but when it explodes it is usually right at the point where your hand holds the fore-end of the gun.

Modern open-hearth steel, at its worse, is better than the best Damascus. So if you have a family heirloom, a beautiful old gun handed down for generations, look at it closely. Should the barrel have this watered spiral look, take it to a good gunsmith. Have him fix it so it cannot possibly be fired. Or else find the largest lake you can and drop it right in the middle.



Boot Chains Make Fine Wading Aids

By Don Shiner

HIP boots are not only an important piece of outdoor gear for fishermen, but equally so for hunters and trappers also. Duck hunters find hip boots essential for setting out rafts of decoys and retrieving bagged birds. Trappers find boots necessary when wading icy streams in quest of minks, muskrats and beavers. And it is this latter group that must certainly guard against falling into the icy water. While fishermen are not too uncomfortable from a fall into a trout stream during June, for the trapper who loses his balance and plunges into the cold water of winter, it can be an accident of serious proportions!

A wading staff is one aid that helps trappers cross swift, slippery stream beds. Boot chains are another, and unquestionably one of the best aids in helping the trapper make such dangerous crossings. Several variations of boot chains are presently on the market, all of which grip slippery rocks like sticky paper holds house





flies. But if none are available in your locality, or if you are pressed for the service of such chains, a satisfactory pair can be fashioned from materials usually found in the household.

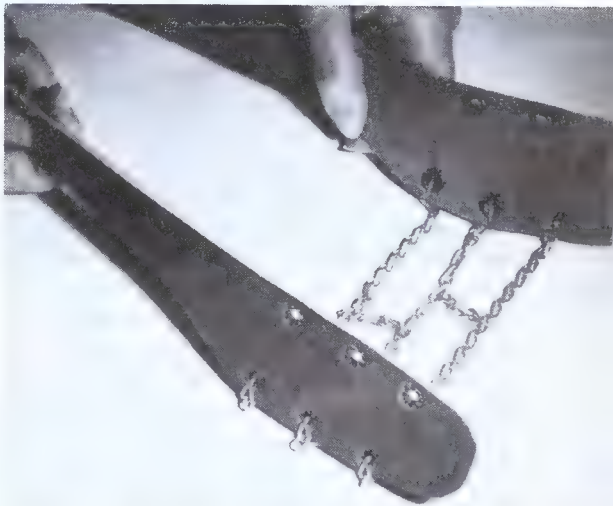
You will need a few feet of small chain, pieces of leather, two belt buckles and some rivets and eyelets. Then, the first step in making the sure-grippers is cutting a paper template to fit along the side of the boot foot. A satisfactory pattern is made by laying the boot on its side and tracing the outline. The template is more or less a profile view of the boot, with a narrow portion extending back to and beyond the heel to serve as a strap.

Transfer the template outline to the leather and cut four pieces. Cow or horse hide is best, but other leather can be substituted. Then after the two pairs of straps are cut, a series of three or four holes are punched and eyelets clinched in place on both top and bottom edges of the toe portion. Links of the chain are opened and fitted between the eyelets on the bottom edge, while those on top hold the tough raw hide strings for drawing the chains tightly around the vamp. Buckles are riveted to the heel straps.

The corrugations or treads origi-

nally moulded into the soles of boots normally grip the rocky stream bottom fairly well when new. But several hikes over rough pavements wear the grooves smooth. Wading over wet stones then is like walking a tight rope—one missed step and you're down. In the trapper's case, it's into the icy water. The heavy wool clothing freezes and the body is chilled long before he can reach a cabin or car for another change of garments.

A fall into a swift, cold trout stream during April convinced me that boot chains are worth owning and the best possible insurance against future accidents. I made a pair similar to those described in the illustrations, and found walking was greatly improved. And after wearing the strap chains for several occasions and becoming conditioned to the solid traction, I felt uncomfortable without them and floundered about in the stream like a deer prancing on smooth ice. Later, when the muskrat season opened, the chains were still intact on my boots, so I continued to wear them. The sharp chains dug into the ice and gave me firm footing. I experienced no trouble when stepping into the cold water and wading across the treacherous, slippery bottom.



Scouting Marches Forward

By Larry E. Stotz



UNDER the setting sun one evening last July, I watched 50,000 Scouts marching into the huge outdoor arena at the Valley Forge National Jamboree. Viewed from a distance through the evening haze, they looked like a phantom army marching with banners through dust clouds to some rendezvous with destiny. But there was no glint of sunlight on bayonets for this was an army of boys, and they marched with the light heartedness of youth on a great adventure. Bands played, Drums rolled, and bugles blared. The American flag never looked more beautiful to me than it did that evening under the setting sun at Valley Forge. Flag bearers were massed into groups of forty or more, and boys from Dixie still proudly flew the Stars and Bars. The tramp of thousands of feet on the hard, dusty ground; the swirls of dust and the loud cheers as the cream of American youth marched by was a never to be forgotten experience.

In July ninety-four years ago 50,000 other Americans were casualties in three days of bitter fighting at the Battle of Gettysburg, another hal-

lowed spot on Pennsylvania soil. There too, American youth marched but for a different purpose. Now the great-grand-children of the boys of the Blue and the Grey were again meeting in Pennsylvania, but in a spirit of comradeship, along with thousands of other American boys from all parts of America. With them were Scouts from the Dominion of Canada, and other foreign countries.

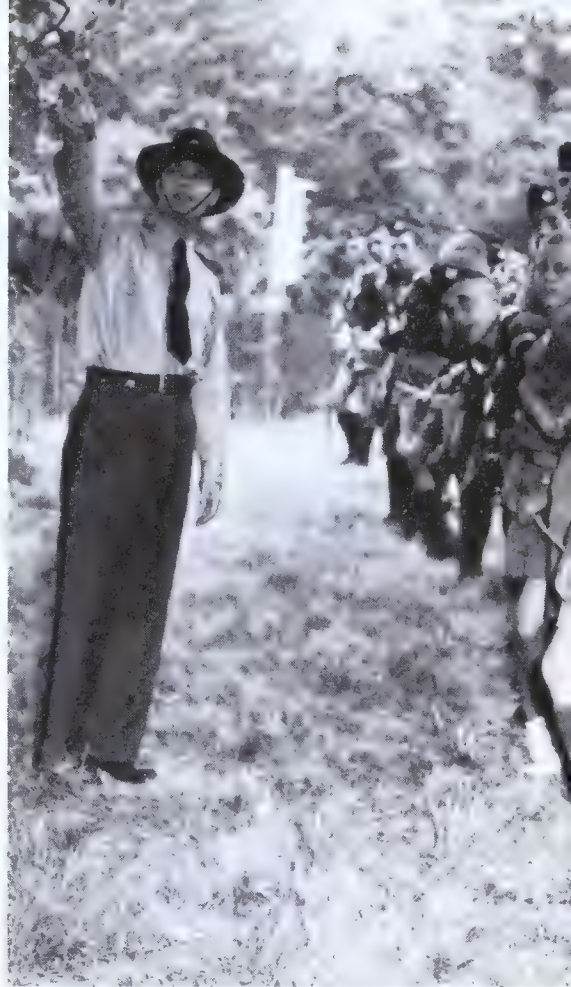
They were at Valley Forge for fun and good fellowship, but they were also there to learn by doing and seeing.

When Washington and his ragged troops camped at Valley Forge there were less than 4,000,000 people on the American continent. By the time the Battle of Gettysburg was fought there were 33,000,000 people, and today there are nearly 170,000,000.

The demands made on our soil, water, wildlife and forests by this great increase in population has been recognized by the leaders of the Boy Scout movement, and today conservation of our natural resources plays a vital role in Scouting.

At the Jamboree, the inter-relation

between soil, water, forests and wildlife was graphically demonstrated by a "conservation circus." Three identical units were set up on the 3,000 acre Valley Forge State Park. Each conservation unit contained three "arenas." One featured soil and water conservation, another wildlife and a third forestry. A carnival spirit pervaded the "House of Magic"—a large circus-type tent located at each of the three units at the Jamboree. Here 200 Scouts at a time saw a new film, "Our Magic Land" and a slight-of-hand show demonstrating conservation points. From this tent the Scouts went on conducted tours through the three out-door arenas which featured wildlife; soil and water and forestry. Specialists in these three major phases of conservation lectured to each group of Scouts as they passed through their areas. Carefully developed exhibits illustrated the lecture tours, and the Scouts were able to see good and bad practices in the handling of our priceless natural resources.





OUTDOOR FUN WITH A FUTURE



Let's Make A Buzz-Board

By Ted S. Pettit

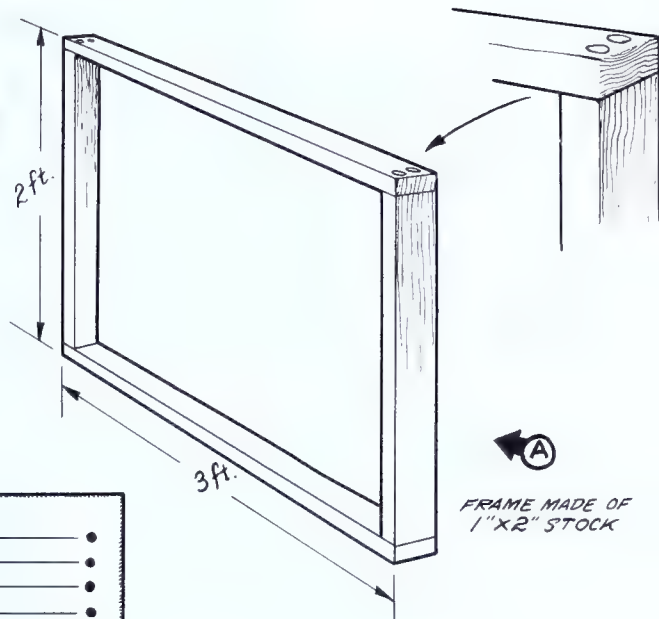
ELECTRICAL quiz boards or buzz-boards are easy to make and can be used in many different places. Their chief purpose is to make a game out of learning something about nature. They are good preparation for trips into fields and forests for those who do not know much about the outdoors. For those who do, quiz-boards are good for review and fun to use in a competition.

Very simply, a buzz-board is a piece of heavy cardboard or plywood on

which pictures of birds, mammals, reptiles, tracks, leaves, or natural objects themselves, are mounted. On one side of the board are names of the objects. Beside each picture is an electrical contact point or doorbell button. Beside each name is a contact point or button. When the two correct contact points are touched with pointers, or the two correct buttons are pushed, a buzzer sounds or a light flashes, or both. If the correct name is not matched up with the cor-

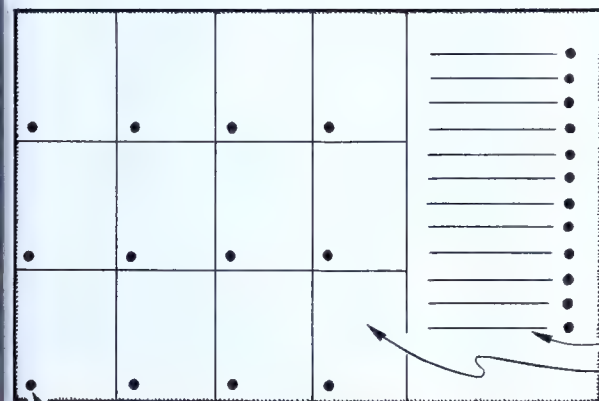


make a BUZZ-BOARD



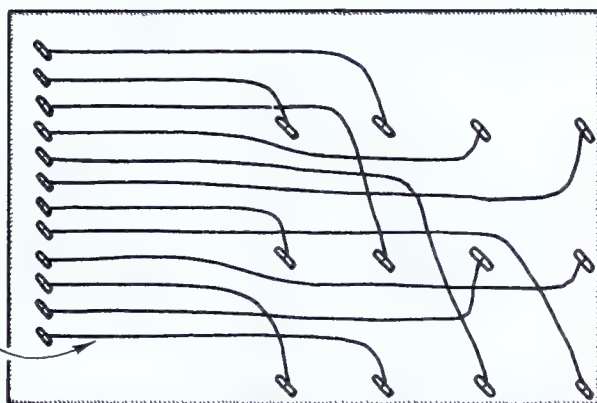
← **(B)** FRONT OF BOARD

COLUMN FOR NAMES
6" X 8" SPACES



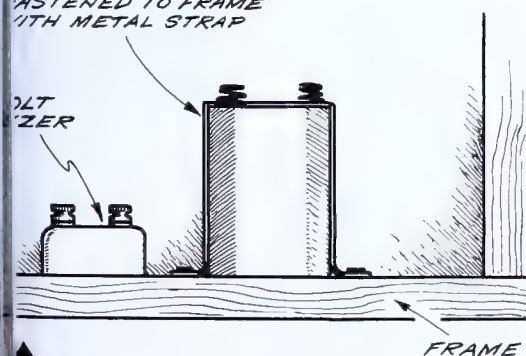
← **(C)** BACK OF BOARD

BELL WIRE CONNECTING
PAIRS OF FASTENERS

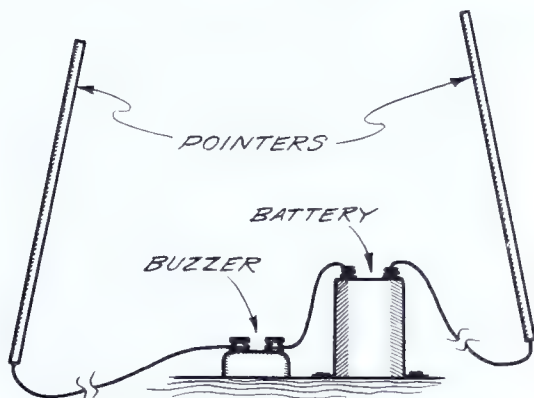


VOLT LANTERN BATTERY
FASTENED TO FRAME
WITH METAL STRAP

VOLT
METER



← **(D)** BACK OF FRAME



**BATTERY & POINTER
HOOK-UP (E)**

rect picture, nothing happens. There are many different variations of this basic quiz board—each designed to teach or review different phases of nature and conservation.

Buzz-boards can be made for about \$3.00 or may cost \$10.00 or so, depending upon how they are made. The more expensive one will last for years and may be used in many different ways.

Buzz-boards are excellent “gimmicks” to make for use in Cub Scouting, Boy Scouting, Girl Scouting, Campfire Girls, 4-H or Junior Conservation Club programs. Making one or more is a fine good turn for Boy or Girl Scouts, when they are given to schools for use in classrooms. Even adults get a kick out of using them as is proved by their popularity in museums and along nature trails in our national and state parks.

A Simple Buzz-Board

The simplest kind of a quiz board may be made by using a piece of 2x3 feet heavy corrugated cardboard such as packing cases are made of. Make a simple frame of 1x2 stock and tack the cardboard to the frame. (Illustration A). Next, mark off the front of the cardboard as shown in Illustration B. On the left side of the board you have twelve 6x8 inch spaces. On the right side you have a column for twelve names.

Use an ice pick or sharp nail and make a hole in the lower left corner of each space on the left side of the board and at the right end of each line in the column on the right side of the board.

Get twenty-four 1-inch brass fasteners (the kind that look like a cotter pin with a flat head) and insert them in the holes.

Now, using bell wire or fine copper wire, which you can get in a dime store or radio shop, start your wiring. What you do is connect one point on the left with one point on the right. See Illustration C.

Connect the points by wrapping the wire tightly around the base of the paper fasteners and then by opening the fastener with a screwdriver or knife so that it will stay in place.

The next step is to make the pointers with which you touch two contact points to make the buzzer sound.

You need a six volt battery, two round brass curtain rods, bell wire, and a six volt doorbell or buzzer. Mount the buzzer or bell on the frame of the board, inside on the back, and fasten the battery to the frame with tape or a metal band. (Illustration D)

Cut two pieces of wire each 4 feet long and push them through the round curtain rods. Be sure that an inch or so of wire makes good contact with the rod. It is best to solder the wire to the rod but it may be wound around tightly, if no solder is available.

Hook up the buzzer battery and pointers as shown in Illustration E. Connect one contact point on the buzzer with one contact point on the battery. Connect the other contact point on the battery to one pointer. Connect the second contact point on the buzzer with the second pointer.

Now test the buzz-board. If wired according to Illustration C, touch one pointer to the second point down in the right hand column. Touch the second pointer to the upper right point on the left side of the board. When the buzzer sounds, you know you are almost finished. If it doesn't work, check your wiring to see that all connections are tight. You can get help in wiring from your school science teacher or any radio man or electrician.

You are now ready to finish the board. You do this by fastening pictures on the left side of the board—in those 6x8 inch spaces, and by printing the correct name on the proper line on the right. The easiest way to be sure your picture and name

1 _____				
2 _____	D	C	B	A
3 _____				
4 _____				
5 _____				
6 _____				
7 _____	H	G	F	E
8 _____				
9 _____				
10 _____				
11 _____				
12 _____	L	K	J	I

Ⓕ BACK OF BOARD

LETTERS AND NUMBERS AID IN CHECKING
FOR PROPER WIRING

are right, is to number the lines (on the back of the board) from top to bottom, and then letter the squares from left to right. (See Illustration F). If you wired your board as shown in Illustration C, the picture in space A should be labeled on line 6. The rest of the spaces should be labeled as follows:

A-6	G-3
B-4	H-7
C-1	I-8
D-2	J-5
E-9	K-12
F-11	L-10

One of the best sources of pictures for this buzz board is back issues of the GAME NEWS. The covers are just about the right size to fit the spaces, and the variety of pictures over a few years is tremendous. If you have saved your copies, you have pictures of birds, mammals and dogs.

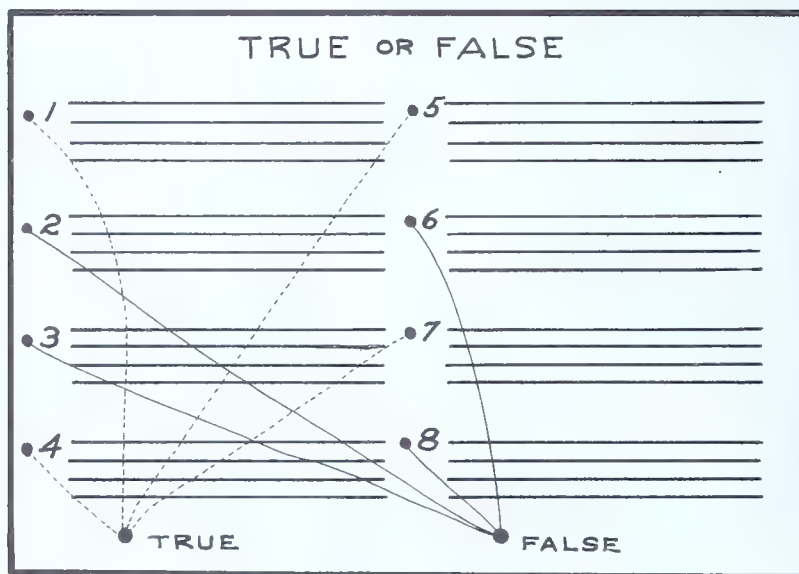
Another good source of pictures is the Golden Nature Guide series, a series of books on mammals, birds, flowers, fish, reptiles and trees. These books cost \$1.00 each and are available in most book or stationery stores or newsstands. With all these pictures you could make five or six buzz-

boards—one of each of five or six different subjects.

If you do not want to use pictures, it is possible (and perhaps better) to use natural objects in the spaces on the left. Actual leaf specimens can be mounted with gummed tape or staples. Twigs; tree seeds; grasses; flowers; ferns; moss; fruits; casts of tracks; or even signs of animals can be mounted on the left and identified on the right. Signs of animals makes an interesting and perhaps tricky quiz board.

Get out in the woods or fields and collect everything you see that indicates the presence of animals. Take along some small plastic pill bottles to hold the collections. Look for the following: Owl pellets (break them apart and see what the owl ate—skulls and bones show presence of small mammals as well as owls); droppings; bits of fur or feathers; old nests; beaver chips; porcupine chewed wood; nuts chewed by squirrels; make casts of tracks; candy or cigarette wrappers to indicate litterbugs; a section of dead tree to show woodpecker holes or nest; other signs of feeding.

It is possible to make a collection



© TRUE OR FALSE BOARD

ILLUSTRATION SHOWS LAYOUT OF FRONT OF BOARD. WIRING IS DONE ON BACK OF BOARD.

of plaster casts or tracks and mount the casts on the buzz board. Identify them in the column on the right.

Another good stunt is to mount leaves, twigs or wood samples on the left and instead of writing names on the right, list uses of the tree. The purpose is to match the use with the twig or leaf. Possibilities might be:

Leaf or twig	Use
Sugar Maple	Maple syrup
Dogwood	Bird food
White Oak	Lumber
Hickory	Skiis
White Ash	Baseball bats
Balsam	Christmas trees
Sumac	Rabbit browse
Beech	Deer or turkey food
Walnut	Food or furniture
Cedar	Food or cover for birds
Birch	Tinder for starting fires in wet weather
Pine	Lumber

True-False

On much the same principle it is easy to make a board on which statements can be mounted so that you try to figure out whether they are true or false. See Illustration G for wiring plan.

Possible sentences might be:

1. The game animal taken most frequently is the cottontail. (true)
2. Young fawns found while one is hiking should be left undisturbed. (true)
3. A hunting license permits you to hunt anyplace you please. (false)
4. You can tell the age of a buck by counting the points on his antlers. (false)
5. Ringneck pheasants were brought here from Asia. (true)
6. The woodduck is the only duck that nests in trees. (false)
7. All hawks eat game animals, so should be shot. (false)
8. The largest rodent is the beaver. (true)

9. Porcupines throw their quills. (false)
10. The smallest mammal is the shrew. (true)
11. You need a 90 pound bow to hunt successfully. (false)
12. A good compass will point the way back to camp. (false)
13. A 22 long rifle bullet will carry a mile or more. (true)
14. A rattlesnake always rattles before he strikes. (false)
15. Moss always grows on the north side of a tree. (false)
16. Tests prove that yellow is a safer color than red for hunting clothes. (true)
17. Gauge and caliber mean the same thing. (false)
18. A whistler and a goldeneye are the same duck. (true)
19. Forest fires are harmful to wildlife as well as the forest. (true)
20. Bears are true hibernators. (false)
21. Woodchucks are true hibernators. (true)
22. The Osprey is called fish hawk. (true)
23. Bison once lived in Pennsylvania. (true)
24. The skunk is a member of the weasel family. (true)

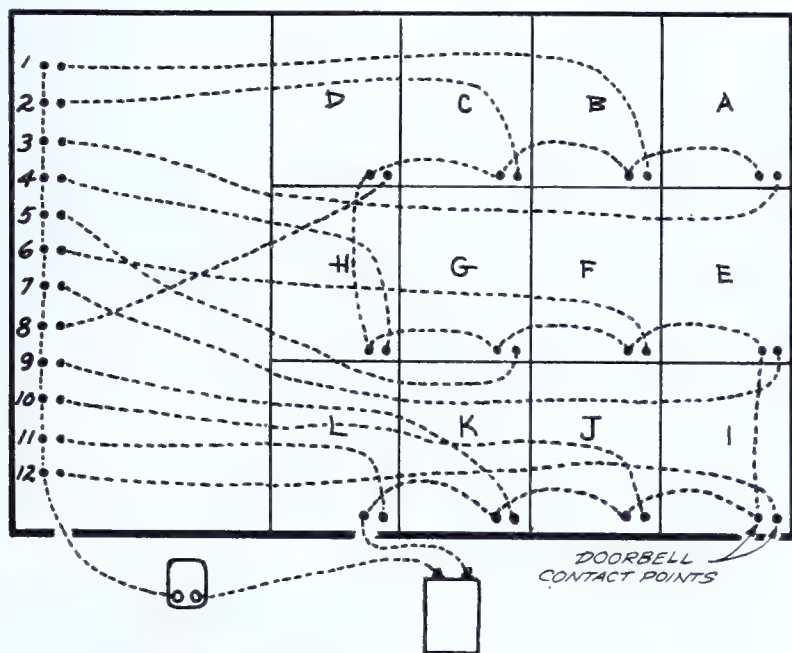
An All-Purpose Buzz-Board

An all purpose buzz-board—one on which you can change pictures and captions easily is shown in Illustration H.

Instead of using cardboard on a frame, use a piece of $\frac{1}{8}$ " plywood, and fasten on strips of metal or wood molding as shown. This molding may be obtained in any hardware store or building supply yard.

Using the molding in this way, it is possible to make up a dozen sets of cards and captions, and change them easily any time you wish.

The buzz-board in Illustration H also has doorbell buttons instead of pointers and contact points. This buzz-board costs about \$12.00 to \$15.00 to make, but it will last for years. The wiring plan is shown in Illustration I.



① DOORBELL BUZZBOARD

BACK OF BOARD SHOWING WIRING ARRANGEMENT

First mount twelve doorbells down the outside of the column at the right, first drilling two holes for each button through the plywood where the button will be placed. Connect short pieces of wire to the two contact points on each button. Push the wire through holes to the back of the board, before screwing on the buttons.

Next, mount buttons in the corner of the spaces on the left side board in the same way. Now nail on the molding.

Hook up corresponding contact points on the buttons on the right to one piece of wire. Fasten that wire to one point on the buzzer. Fasten corresponding contact points of the buttons on the left to one piece of wire, and fasten that wire to one connection on the battery.

Now connect the second contact point on button No. 1 on the right to the second contact point on the button in space B on the left. In the same way connect other buttons as follows:

<i>Right</i>	<i>Left</i>	<i>Right</i>	<i>Left</i>
1	B	7	G
2	C	8	D
3	A	9	K
4	H	10	J
5	E	11	L
6	F	12	I

Finally, connect the second battery

terminal with the second buzzer terminal.

You are now ready to mount pictures on cards and write captions on cards, and slide them into place.

Changing the Pattern

Many times people who use these buzz-boards frequently enough get to know the wiring system. They remember which two buttons to press to sound the buzzer. They do not necessarily know which caption goes with which picture, but they are right every time.

One way to fool them is to change the pattern frequently. For example, after a few days, rewire the board so 9 is connected with I; 11 with J; 8 with A; etc. This means making new caption cards; but that is easy. Make up several sets of caption cards and on the back, sketch out the wiring plan that goes with card. Changing the wiring is quick and easy, if you use the new screw-type solderless wire connections, that are sold by electrical shops or radio repair shops. They cost only 2 or 3 cents each.


Buzz-boards are fun to make and easy too. They are fun to use and can teach a lot about nature and conservation. Your outdoor fun in the future depends upon how well you know the outdoors, and upon how much all of us understand and do something about conservation.

NEW BOOKLET OUTLINES PENNSYLVANIA VACATIONS

The Keystone State in outline might well be the title of the Department of Commerce's new booklet on vacation opportunities in Pennsylvania. Actually it's called "More Vacation Fun for Everyone in Pennsylvania" and it can be obtained free by writing to the Department of Commerce, Harrisburg 4, Pennsylvania.

Shaped in the proportions of the Commonwealth boundaries, the booklet is 28 color pages of word and picture about the different sections of Pennsylvania. Designed as a guide for potential vacationers, the booklet shows many highlights of the scenic beauty and historical traditions of the Keystone State.

While no specific hunting tips are given, there are innumerable suggestions of the different types of attractions and vacations which are available right in our own backyard. The attractive booklet breaks the Commonwealth into six different regions geographically and pictures many of the sights in each.



Log of the October, 1957 Archery Season

By Tom Forbes

WHAT criteria shall be used to evaluate the 1957 October Bow and Arrow Season in Pennsylvania? Is a successful season to be measured solely on the number of deer bagged by the archers or the number of bowmen who participated in the hunt? Does the money received from the sale of special archery licenses, the sales of archery tackle, or the services in supplying food, lodging, and transportation measure the success or failure of the season? Does the length of the season, the weather, the sun highlighting the vivid colors of timbered slopes, filtering down through the trees to turn the fallen leaves into spots of gold, or a comet riding high in the sky seen in the half light before dawn weigh the scales heavily in

favor of a successful hunt although we failed in our attempt to send an arrow to its mark? We can evaluate the peace and quiet contentment each of us achieves in contact with nature? Who can put a price on memories of the smell of wood smoke curling up from the fireplace in the evening as we recount the incidents of the day; the antics of the squirrels and other small woodland creatures viewed from our place of concealment? A ruffed grouse glides in on silent wing, alights, and struts in blissful unawareness of our presence. A far cry from the thundering, nerve racking explosion that takes place when he erupts from cover and takes flight during the grouse hunting season. Surely, each one of us has his or her own yardstick by which we measure our successes and failures, but to those of us who were fortunate enough to carry a bow into the outdoors during the past special archery season there are few who do not count the season a success.



Measured in terms of licenses issued, approximately 55,000 archers were eligible to hunt during the special archery season in Pennsylvania. This is more than twice the number of bow hunters licensed for the 1956 special archery season. Each year since 1951, the first year that a special bow and arrow season was introduced in Pennsylvania, the number of bow hunters has increased. Six years ago 5442 licenses were issued and the bow hunters bagged 32 bucks, a success ratio of 1:170. In 1952 the success ratio was only 1:340 when 8432 bow hunters took 25 male deer. This is the low point measured in terms of bow hunter success in the special archery seasons to date. During the 12 day special archery season in 1953 the success ratio increased to 1:125, when 10,691 bow hunters accounted for 84 male deer. In 1956 the season was lengthened from 12 to 17 days. Bucks only were legal game and the bow hunters took 224 deer. That year 26,029 archers participated in the special archery season and at-

tained the highest success ratio, 1:116, to that date.

In 1957 the Pennsylvania Game Commission authorized an any deer special archery season of 8 days duration in October. Preliminary reports indicate that the bow hunters bagged 603 male deer during this period. An additional 713 antlerless deer fell to the bowhunters. Comparing the success ratio of bucks taken during this eight day period with the 17 days season for bucks only in 1956 we find that the 1957 season resulted in a success ratio of 1:91 for bucks which is the highest of any of the special archery seasons. The overall success ratio for 1957 is 1:42, which is also a record. Considering the well known fact that antlerless deer far exceed in numbers the legal bucks seen on any day's hunt it is interesting to note that 46% of the total bowhunters bag was composed of antlered deer. The fear expressed in some quarters that an any deer season would result in a slaughter of does is thus seen to have been needless. It would appear that bow hunters as a class are selective when they take to the woods in search of deer.

Deer were taken by the bowhunters in all but four of the State's sixty-seven counties. Delaware, Mercer, Montour, and Philadelphia Counties were the exceptions. The highest number of kills was registered in Potter County where archers took 72 antlered and 75 antlerless deer. Forest County was second with 62 antlered and 71 antlerless deer. These two counties accounted for approximately one-fifth of the total bag taken in the State during the special season. Few deer were taken by the bowhunters in the counties which are predom-



SULLIVAN COUNTY BUCK weighing 150 pounds fell to the archery prowess of Bill Roberts, Kingston during the 1957 season. He used a 40 pound bow and shot from 40 yards to down this 6 point trophy.

antly agricultural; 2 in Armstrong, 10 in Indiana, 3 in Lancaster, 3 in York are typical of these counties. However a total of 33 deer of which 21 were bucks were taken in Westmoreland County.

Questionnaires returned to the Pennsylvania State Archery Association by members show that the composite bowhunter shoots a 53 pound bow in the hunting field. Two of the successful archers carried bows drawing between 70 and 75 pounds and 9 reported that their bows drew 40 pounds or less. A thirty pound bow brought down a deer on the spot at 25 yards and one of the fair sex registered a chest hit with a bow drawing 27 pounds. The deer was recovered within thirty-five yards.

About half of those who reported used a two bladed broadhead and the remaining half were equally divided between three and four blades. One bowhunter bagged his deer with a six point blade.

Forty per cent of the deer were recovered within 50 yards, 30 per cent within a 100 yards, 18 per cent within 300 yards, and 12 per cent at distances exceeding 300 yards.

Bowhunters arrested for violations of the game law numbered 77 during the special archery season. Thirty-one of the violations were for hunting between the hours of 5:30 p.m. and 6:00 a.m. Eleven were arrested for using an automobile to hunt deer and 18 for throwing an artificial light on deer while in possession of a bow and arrows. Four archers were arrested for driving on State Game Land roads closed against vehicular traffic. Hunting within 150 yards of occupied buildings accounted for 5 arrests and 2 archers were apprehended when they attempted to kill a second deer. In addition, individual bowmen were arrested for: attempting to kill deer with a rifle, possessing deer unlawfully taken (deer was killed with a firearm and an arrow was stuck in the bullet hole), carrying a firearm, shoot-



POTTER COUNTY BUCK fell to S. Roy Hollinger, Lancaster on his first hunt with bow and arrow. He used a 44 pound bow at 55 yards to down this 4-point, 125-pound antlered deer.

ing at deer in a public park, hunting without a special archery license, and failure to tag a deer within one hour after killing.

Fourteen accidents were reported during the special archery season. Twelve were self inflicted. An analysis of the individual reports shows that the majority of wounds were incurred when the archer was carrying an arrow nocked in the bow. A stumble or a fall resulted in a self-inflicted wound. The following report is typical: "I was carrying my bow in my left hand with an arrow nocked in position, stepped over a log and fell. Arrow went into calf of leg." Two bowhunters who were not using quivers and carried arrows in their hand were injured when they stumbled and fell. One suffered a minor chest wound and the other a wound in the thigh. An archer shot at a crow in a tree and the falling arrow deflected by a branch struck him a glancing blow on the left cheek bone. Of the two bowmen injured by



PGC Photo by Parlamen.

FOREST COUNTY buck was bagged by Dick Covington, Rocky Grove, on opening day of the 1957 Archery Season. The successful hunter shot from a range of 40 yards, the 9-point buck traveling 90 yards before dropping.

others, the circumstances were almost identical. In each instance one bowman was following a companion closely along a path. The bowman in front stopped suddenly and his companion taken unaware jabbed the leading hunter with the arrow nocked in the bow. None of the wounds were of a serious nature but the majority required medical attention, and in one case a doctor's services were required to remove the hunting blade.

Many family groups, including those with minor children, enjoyed their annual vacation in Penn's Woods during the special archery season. The recreational possibilities of the special archery season are unlimited and each season sees greater numbers taking their vacations at this time of the year. Formerly the exodus of vacationists began shortly after Labor Day. Now the facilities of the State Parks and public camps are in increasing demand during the month of October.

Come what may, each and every bowhunter looks forward to the 1958 special archery season. It's a time to hunt and a time to play, and a grand time of year to live in the great outdoors.

ART OF CAMOUFLAGE is a valuable trick in bowhunting. Although lack of motion is usually more important in keeping deer within range, the hunter whose outline is broken with natural shadows will often find deer not afraid to move close to his place of concealment.



Let's Put Some Light on the Subject

By John F. Clark

Illustrated by the writer

GOT an old shotgun that's ready for the junk heap? Or perhaps you have that old stock left over when you had new wood put on old "Betsy" last year. In any event you are missing a good thing if you throw them away. With a little bit of sanding, drilling a couple of holes, and a small outlay of cash, you can turn those old stocks into lamps that will add a great deal to the appearance of your den or hunting camp. As a matter of fact, they even look good in the living room.

For the gun club that is short on funds, these lamps make inexpensive, and very attractive shooting trophies. They're a change from the usual medal or plaque.

In order to turn the stocks into lamps you will need the following items:

Shotgun stock (One with the hole clear through)

Piece of wood for the base (Approx. 1" thick)

Lamp wiring kit

Lamp shade

Two wood screws (About 3" long)

Sandpaper (Medium to very fine)

Tubing (To fit lamp unit)

Spar varnish

Incidentally, if you don't have an old stock, some of the stock manufacturers can supply you with factory "seconds" at a reasonable price.

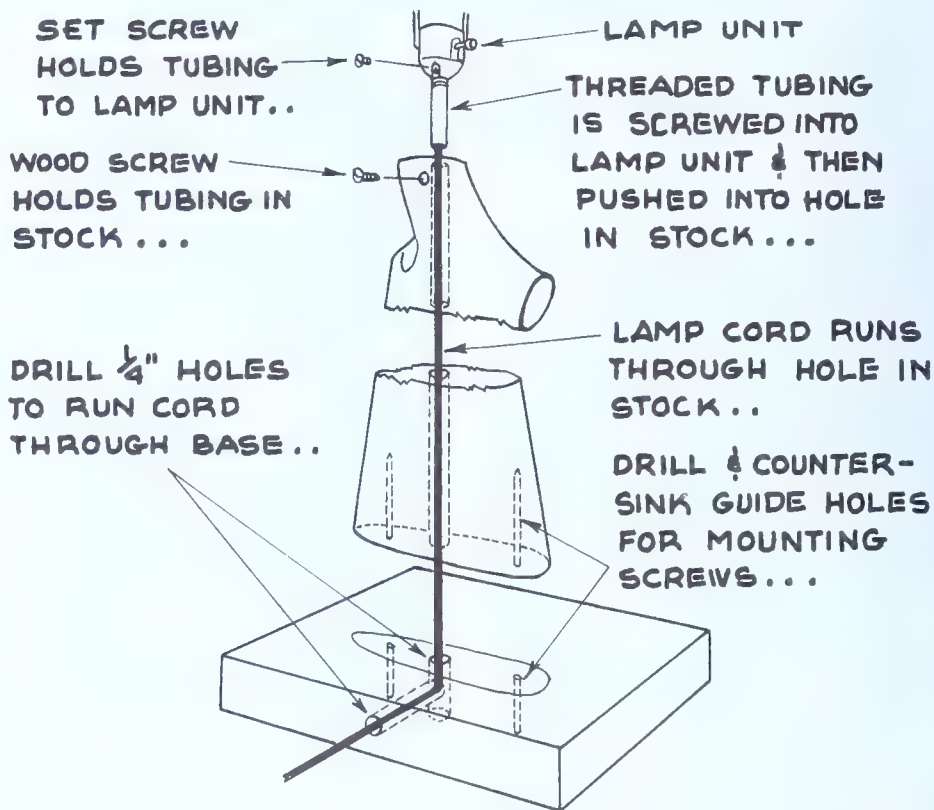
First you will have to sand down the stock to remove any nicks or scratches. Start out with the medium sandpaper and finish with the very



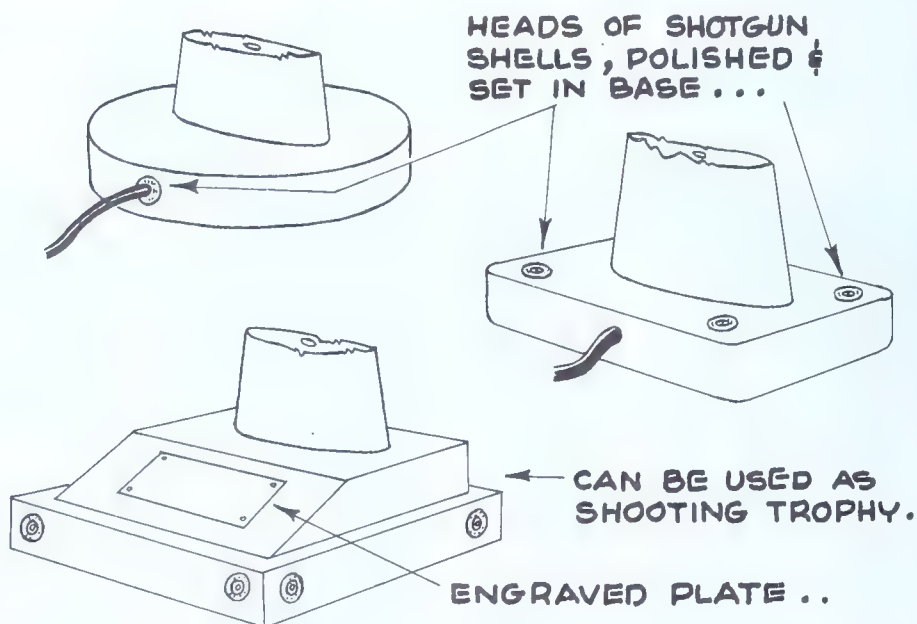
fine. Sand down the butt of the stock so that it sets level. Then apply several coats of varnish to the stock.

The base is made from the same kind of wood as the stock. The drawings will give you some ideas as to the type of base you want to make. After sanding, drill the holes for the mounting screws, and the lamp cord. Then varnish. After the lamp is completely assembled, cut a piece of felt to the size of the bottom of the base and glue in place. This prevents the lamp from marring the furniture.

The brass bases from shot shells add a decorative touch.



SOME IDEAS FOR BASES...





The Gun Dog

By Herbert Kendrick

A GREAT number of hunters continue to hunt small game without the aid of a trained gun dog. Perhaps it is true that more game can be bagged by "walking them up" than by hunting with a poorly trained dog. The only way to hunt birds successfully, however, is with the aid of a properly trained dog.

The modern bird dog logically belongs second only to the gamebird itself because he is by far the most important adjunct to the sport of hunting. The upland gunner can easily buy a new gun or other hunting equipment on short notice. But the process by which he possesses a fine, well-trained dog is very slow and

many times uncertain. Grouse, woodcock, pheasant or quail hunting without a dog is just not bird hunting at all. Any sportsman who knows and loves the sport, if given a choice, would much rather go into the autumn covers without his gun than without his dogs. During the market hunting days a good dog proved to be a very necessary part of the hunter's outfit.

In recent years the upland gunner has become highly conscious of class dogs as an aid to bagging game. In the woods and fields the dog has become the hunter's close associate and partner, providing all the companionship that good men require. Many men fail to realize how much pleasure is added by working with a dependable dog. Even though a hunter has friends with whom he hunts with pride, he does not stay home on a clear crisp day for the



lack of human companionship if he owns a good dog.

Hunting with a good dog during the open season is the very essence of the fine sport. But since the seasons are short, many men continue to follow game with their dogs throughout the winter months, freely content to watch the dog's work with no sense of loss because the gun is left at home.

A continually growing interest in bird dogs is regarded as beneficial to game conservation. The more attention is given to owning better dogs, the more interest is created to have more birds on which to work the dogs. A well-trained retriever leaves no dead or wounded birds in the woods or fields.

Many sportsmen do not have the time to develop a young puppy into a finished gun dog. It is often necessary, therefore, to purchase a mature dog already trained for the field. To buy a trained dog, secure the advice of a dependable dog man, asking him to recommend a proper kennel. Decide the breed and sex of dog you desire. Write or visit the kennel, stating your needs and, if they have a dog that seems to suit you, by all means visit the kennel and have the

handler demonstrate the dog's ability in the field on wild game. If the dog looks good to you, take him home. Take plenty of time to let him become acquainted with you and his new environment before taking him into the field.

If it is impossible to visit the kennel and see a prospect work, be certain before you buy, that the dog be shipped on a ten day trial basis. When purchasing a dog, please do not expect a thousand dollar dog for a hundred. If your tastes run high in hunting stock, it is necessary to match it with your billfold. In gun dogs, as in every other field, you get only that for which you pay.

Before the season opens, be sure to work dogs in the late afternoons so that they will be toughened and in good working condition before the all-day grinds begin. It is a good time to brush up on his training and correct some of the faults he may have had last season.

If you do not have a dog and feel that it is too late to buy one for this season, make plans to hunt with someone who has dogs. You will find that one of the greatest pleasures in the outdoors is watching the work of a good bird dog.

NEW TURKEY FILM IN DEMAND

Wildlife and hunting prospects have become prime subjects again, as cool weather returns and another game season approaches. At this time of year attendance at sportsmen's meetings jumps and the demand for speakers and motion pictures increases correspondingly. Along with information on game prospects and discussions on new laws sportsmen's organizations, schools and others will seek interesting visual information on wildlife and the outdoors.

The Game Commission's latest motion picture "The Eastern Wild Turkey in Pennsylvania" is one in great demand. It is a documentary film that reveals the life history of this prized bird and shows how good wildlife planning and nature's help brought the colorful bird back to the Keystone State in great numbers.

Here is a fascinating story captured on film that enthralls sportsmen viewers, but it has great appeal also for non-hunters of both sexes.



How to Make a Fox Pelt Drying Board

By Larry J. Kopp

Photos By The Author

SHOWN here are the main essentials required to make a good fox pelt drying board. Included is a thoroughly seasoned white pine board one-half inch thick, seven inches wide and about 40 inches long. It should be knotless although if knots are not located along the edges, the lumber is satisfactory. Tools include a yardstick, a pencil, plane, hatchet or drawing knife, and a small wooden block with sandpaper wrapped around it.

The first step is to plane the board

to a fairly smooth finish on both sides. Next place your yardstick across one end of the board as shown here and make a pencil mark on the board at the three and four inch mark for the nose or tip end. The next two measurements are for the head and shoulders. The proper location of the head is six inches in from the tip. Thirteen inches in from the tip for the shoulders. Make a pencil mark in the center of the board at the six and thirteen inch points. Next, place your yardstick across the board as shown. Make a pencil mark two and one half inches away on each side of the center mark for the shoulders which should be five inches wide; therefore make a pencil mark two and one-fourth inches away on each side of the center mark. These measurements are for



average size fox pelts. Very large pelts require larger boards.

After all the foregoing measurements have been made, take your yardstick and pencil and draw a straight line from the tip mark to the head, from the head to the shoulders, and from the shoulder mark to the base of the board. Make certain your yardstick is flush with the outer edge of the board at the base for it must be seven inches wide.

Use a sharp hatchet or drawing knife to shape your board, but be sure not to cut too close or beyond your pencil marked outline. Next, use a plane and smooth off the rough edges. Tilt the board slightly sideways and plane the sharp corner edges to a smooth, rounded finish.

Finally, to make a really neat job complete, the entire board and especially the edges and the tip should be well sanded. For a beter hold and to do a more efficient job, wrap the sandpaper around a small, wooden block.



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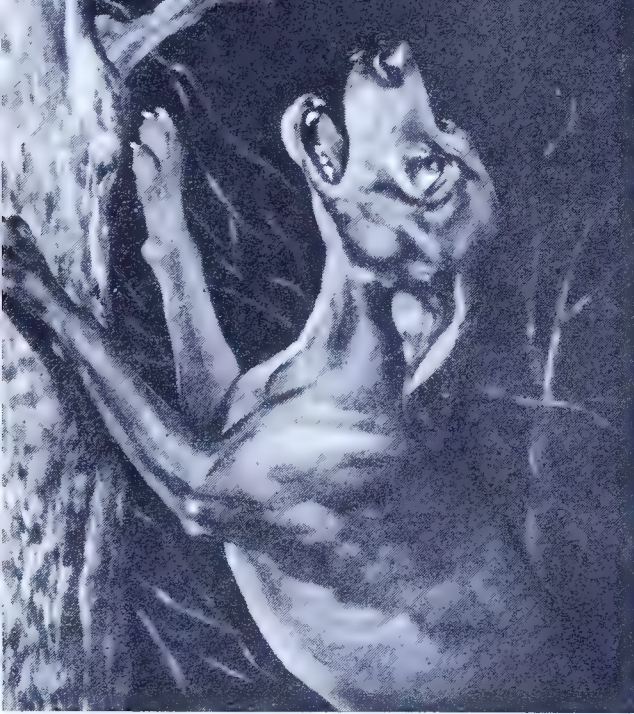
GAME NEWS

MARCH, 1958

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TEN CENTS





THE STORY BEHIND THE COVER

ALTHOUGH not officially recognized by the American Kennel Club as a distinct breed, the redbone coon hound so strikingly portrayed on this month's cover is a very special dog. And he is presented in what to every coon hunter is the finest pose.

Barking "treed" is the clarion call of success to that breed of hunter who night after night seeks the wily raccoon. Other hunters can have their sights on and sound of different game but a coon hunter lives in anticipation of a hound baying the good news his quarry has been cornered.

There are hounds and then there are hounds. But a good coonhound must not only have the basic instinct of trailing which is characteristic of every hound, he must also be a natural tree dog. And that is quite a different matter. Once the raccoon is forced into the treetop, a good coonhound must announce this fact to the world with all the music in his lusty throat. He must furthermore keep this up for hours if necessary until his master arrives on the scene.

Not so many years ago any coon hunter who owned a solid red hound, regardless of ancestry but of proven trailing and treeing ability called his dog a "Redbone." Thirty some years ago, however, a serious campaign was started to produce a true redbone hound through selective breeding. Today, there are many such coon hounds throughout the country.

Here is a dog that knows no fear and is possessed of great intelligence. His quarry is famous for being smart and tricky; the coonhound must therefore be just a little smarter. This at times involves touches of true canine genius. Mister Ringtail is wise in the ways of man and dogs. He is no doubt responsible for more pants being ripped, feet made sore, and dogs whipped than any other wilderness dweller. Thus, any redbone hound seen and heard in the pose selected by cover artist Iwan Lotton deserves more than an extra bone for the morrow's meal.

April is not a time usually associated with this scene. Yet on many a cool spring evening, when the moon hangs bright over the mountains and valleys, hunters and their hounds cannot wait for October's frost and harvest moon. And to many a Pennsylvania ear will come the baying of the hounds, a lonesome calling in the still of the night that always sounds a special thrill. With a redbone hound, such as this, there is no greater sport.

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GEORGE M. LEADER, *Governor*

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Will JohnsEditor
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MARCH, 1958

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Iwan Lotton

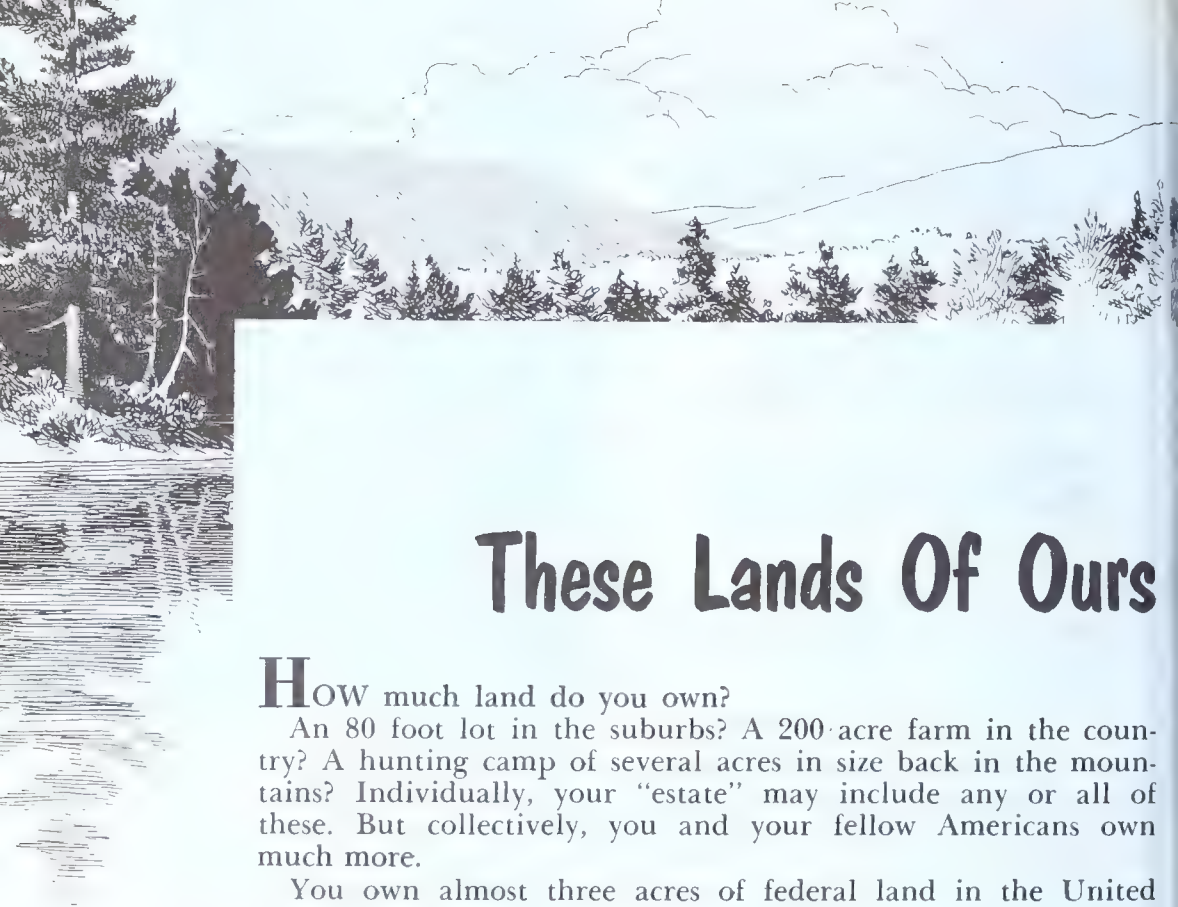
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These Lands Of Ours

HOW much land do you own?

An 80 foot lot in the suburbs? A 200-acre farm in the country? A hunting camp of several acres in size back in the mountains? Individually, your "estate" may include any or all of these. But collectively, you and your fellow Americans own much more.

You own almost three acres of federal land in the United States. That's 12 or more big suburban lots.

You own more than two acres in Alaska.

You own a share in the 181 million acres of National Forests, the 17 million acres of National Wildlife Refuges, the 22.4 million acres of National Parks, the 440 million acres of public domain. And, as a Pennsylvanian, you also own a share of the 4 million acres of publicly-owned land within the Keystone State.

These lands are as much your land as whatever real estate is titled in your name. Some of this huge acreage—equal to one-quarter of the total area of the United States—has been purchased with your money: most of it was bought by your forefathers, either in cold cash or blood, sweat and tears. All of it is managed and protected today with the money you pay in hunting or fishing license fees or from the money you pay each year in taxes.

Held in trust for you and your children, these lands may not seem as real or as close to you as your own home. But chances are you have visited these lands or will someday make use of them in one way or another. Not everyone can spend a vacation in Yellowstone Park, take a hunting trip for moose in the Targhee National Forest of Idaho and Wyoming, or photograph muskox in the Nunivak Wildlife Refuge of Alaska. But in ever increasing numbers, Americans and their families are visiting these lands. In less than a day's drive, for example, one or more National Forests can be reached from practically any spot in the United States.

The real value of these public lands, however, may well lie in other, more indirect benefits to you and your family. Some

of the lumber used in your house may have come from a stand of Douglas fir being cut selectively on a National Forest in Oregon. The roast of beef you ate last night may have come from a herd of cattle grazing on public land in Montana. Your best woolen suit may have been first sheared from a flock of sheep summering on the public domain lands in the high Rockies.

Fifty years ago President Theodore Roosevelt appointed a National Conservation Commission. Headed by Gifford Pinchot, Pennsylvania's own famed forester, governor and conservationist, the 50 members of this Commission studied ways and means of best caring for and perpetuating our public lands.

This month—a half century later—the National Wildlife Federation and its State affiliates are again calling our attention to these public lands, held in trust by local, state and federal governments. During National Wildlife Week—March 16-22—every American is being asked to **PROTECT OUR PUBLIC LANDS**.

The National Wildlife Federation is an association of state federations or leagues and their affiliated local conservation clubs. The total membership exceeds two million persons. It is not a government agency but an association of citizens interested in conserving the natural resources of our country. Through its national officers, with headquarters at 232 Carroll Street, N.W., Takoma Park, Washington 12, D.C., and its field representatives and its members, the Federation has been responsible for informed public opinion leading to much important legislation and to many action-packed programs in the conservation field. It is financed by civic-minded persons throughout the nation who every year send in small contributions in exchange for Wildlife Conservation Stamps.

National Wildlife Week was first proclaimed by President Franklin D. Roosevelt in 1938. It has been sponsored annually since by the Federation and the state groups that belong to it—in Pennsylvania, the State Federation of Sportsmen's Club's. Seth L. Myers, of Sharon, is State Chairman for the observance of Wildlife Week throughout the Commonwealth, assisted by county chairman and local committees in each of the 67 counties.

Public ownership of land is part of the American economy and tradition. From the time of the Revolutionary War, the federal government has always been the largest landowner in





BREATH-TAKING BEAUTY of America's public lands is represented by Yosemite National Park in California. There were nearly 60 million visits to the National Park System in 1957 by American families seeking camping, hiking, fishing, nature study and many other outdoor pleasures.

the country. The Louisiana Purchase, the purchase of Florida from Spain in 1819, the annexation of the southwest territory in 1848 following the war with Mexico, the Gadsden Purchase of 1853, the purchase of Alaska from Russia in 1867—all these landmarks in our history added to the public domain. Much of it has been sold, or given free, to early settlers, veterans of our wars, great corporations which built our canals, roads and railroads, public schools and colleges. But there still remains millions of acres—some committed by law to specific uses, a little left for sale to homesteaders, most of it held in trust until present or future generations decide its ultimate fate. Meanwhile, many use our public lands—too few work to protect them!

These, then, are our lands—yours and mine:

THE NATIONAL FORESTS

The American people started the National Forests back in the 1880's when they asked the Federal govern-

ment to save their forest lands from speculators violating the land laws of the West. Congress, in response to this demand, authorized the President to set aside portions of the public land as forest reserves.

Mainly forested, these reserves also contained many acres not covered with merchantable timber, but important for other resources. They produced water; they contained wild game and fish. Few individuals, however, could afford to manage lands for such non-profit crops, and they were not homesteaded in the settlement of the West. These were the lands inherited by the U. S. Department of Agriculture's Forest Service when it was established in 1905. These were the first National Forests. Created from the public domain, most of them were in the West. Emphasis on water conservation paved the way for establishment of other Forests in the East. In 1911 Congress passed the Weeks law authorizing the Forest Service to purchase lands which contained the headwaters of streams vital

to the economy and well being of the people. Thirteen years later the authorization was extended to the purchase of lands valuable for timber. These lands in general had been burned over, cut over, or both. The owners sold willingly, glad to get something for land that wouldn't produce a cash crop for many years to come.

Today there are 149 National Forests, covering 181 million acres of land in 38 States, Puerto Rico and Alaska. Although not all of these lands produce commercially valuable timber, most areas do produce water, forage, wildlife, and opportunities for outdoor recreation—resources vital to the American people. The National Forests are managed on a "multiple use" basis. They produce:

Wood—Within the National Forests 84 million acres are considered commercial forest lands. They support 765 billion board feet of timber. Through planned cutting, close supervision of every timbering operation, and reforestation, the National For-

ests are annually producing a valuable harvest—about 7 billion board feet of timber in 1957 with greater cuts in view for the future. This timber is cut as it matures, not by the Forest Service but by private operators. After advertising, trees are sold on the stump to the highest bidder competent to handle the logging operation. Nearly 30,000 sales are made each year. Most of them are small and the money goes to the general fund of the U.S. Treasury. Last year the total was more than \$100 million. One-fourth of all National Forest receipts is paid to the States for distribution to the counties in which National Forest lands are located.

Water—The National Forests include the most important water-yielding lands in the nation. In the western States, for instance, they comprise 21 percent of the area, receive 31 percent of the precipitation, and furnish 53 percent of the stream-flow. From them comes the water for more than half the irrigated lands of the West. At least 600 water-power develop-

TIMBER PRODUCTION and watershed protection are two primary functions of National Forests. Within these 149 areas, 84 million acres are considered commercial forest lands. Planned cutting, such as this operation on Pennsylvania's Allegheny National Forest, produced 7 billion board feet of timber last year.





ments and 1,800 towns and cities depend on National Forest water.

Wildlife—Last year National Forest lands provided hunting and fishing for nearly 14 million sportsmen. If all the fishing streams in these Forests were in one long river, it would be 27 times longer than Highway 40 from Baltimore to San Francisco. National Forests also provide homes for one-third of all the big game animals—deer, bear, elk, etc.—in the United States.

Recreation—Last year 52½ million recreational visits were made to the National Forests. If each of those visits was by a different person, they would equal one-third of our country's total population. All these lands are open to the public for recreation—hunting, fishing, camping, picnicking, hiking, riding, swimming, skiing or just plain sight-seeing. The Forest Service maintains 4,700 camp and picnic grounds, 200 ski areas, 116,000 miles of foot and horse trails, and 200 swimming pools. About 14 million acres of land have been set apart as wilderness areas for those who want their nature unspoiled.

Forage—Cattle and sheep graze on 61 million acres of National Forest range part of each year. It is mostly high country range, available only for three to five months, but just right to relieve the valley ranges on which ranchers run livestock in the spring and fall. About 20,000 ranchers now use the National Forests for grazing under paid permits.

THE NATIONAL PARKS

Every American, young and old, shares equally in ownership of a rich heritage of great scenery and of places that are important in our history. This is your National Park System. It contains nearly 22.4 million acres of land and water, divided into 177 different parks or units. The names of many of these places are known to nearly every one of us. Yellowstone—the world's first National Park—

Grand Canyon, Yosemite, Everglades, Great Smoky Mountains, to mention only a few. Here in Pennsylvania we have the Gettysburg National Battlefield and Independence Hall Historical Park. These areas were established to preserve outstanding scenic and natural areas or historic treasures. They provide recreation chiefly, including camping, hiking, nature study, fishing and other outdoor activities. Commercial forestry, mining and grazing are forbidden. With very few exceptions hunting is also prohibited.

NATIONAL WILDLIFE REFUGES

In 1903 the first federal wildlife refuge was established. It was small, only 3 acres—but it was a beginning. During the next 50 years, great strides were made until today more than 17 million acres in 275 federal refuges offer a haven to many kinds of wildlife. These Refuges are administered by the U. S. Fish and Wildlife Service and are located in almost every state and territory. They range in size from the one-acre Mille Lacs National Wildlife Refuge in Minnesota to the nearly 3-million acre Aleutian Islands

Refuge which extends 1,200 miles from the tip of Alaska west almost to Siberia. All kinds of wildlife are protected on these areas—from the largest grizzly bear to the smallest songbird. Some insure survival of endangered species like the whooping crane and trumpeter swan. Others are used in safeguarding breeding stocks of wild waterfowl as they move from nesting regions to wintering grounds.

THE PUBLIC DOMAIN LANDS

After the national forests, national parks, wildlife refuges and other areas reserved for special purposes have been taken out, the lands left of Uncle Sam's original holdings are known as the "public domain." These lands, administered by the Bureau of Land Management, provide grazing and wildlife habitat, minerals, timber, watershed protection and recreation. Within them are 59 grazing districts, totaling 158 million acres, which have been organized under the Taylor Grazing Act for the regulation of livestock uses and protection of the range. Some of this "public domain" is still open to disposal under homestead, mining and other laws. The

WHERE THE DEER AND THE BUFFALO ROAM is the Wichita National Wildlife Refuge in Oklahoma. Many national wildlife refuges throughout the land furnish recreation to millions of people without interfering with the management of wild creatures. Fishing, picnicking hiking, and in some areas, hunting is provided for the public.



total acreage in this huge area is 440 million—enough to cover a broad strip of America over 225 miles wide from Boston to San Francisco. The public domain is not that compact, of course, and is located in 26 states and Alaska with the latter containing more than half of it—290 million acres.

STATE PARKS, FORESTS AND WILDLIFE LANDS

Although most people tend to regard State parks, forests and wildlife lands with only casual interest, they may well be the most important areas available for outdoor recreation and natural resource development. The average citizen all too often thinks only of the grandeur of a Yellowstone, the beauty of Yosemite, or the breath-taking view of Grand Canyon. What we fail to realize is that these National wonders are usually "once-in-a-lifetime" experiences—that we will be fortunate if they can be visited on one vacation trip in our busy lives.

Public lands owned by the State, however, are seen or visited almost daily. And some of these areas are fully as beautiful as most of the National Parks and forests. By recent count, there are now 2,100 state parks with over five million acres of woodlands and streams. Last year people visited them more than 200 million times. Forests owned by the states, counties, cities and schools totaled almost 21 million acres—an area nearly equal in size to the State of Maine—and they are growing. Millions of additional acres are in State-owned wildlife lands.

Pennsylvanians have every right to be proud of their State-owned acres. Almost two million acres are contained in their State Forests, located chiefly in the mountainous sections of 40 counties and administered by the Department of Forests and Waters. This vast acreage, open for the enjoyment of the public, is man-

aged "to provide a continuous supply of timber, lumber, wood and other products; to protect the watersheds, conserve the water, and regulate the flow of the rivers and streams of the State and to furnish opportunities for healthful recreation for the public." More than 4,000 campsites on the State Forest lands are leased to individuals, clubs and other organizations at nominal annual rentals. A total of 36 cities and towns depend upon the State Forests for all or part of their water supply while more than a quarter million people within the Commonwealth, as well as many industries, rely upon State-owned forest land as a source of water supply. There are almost 3,000 miles of forest roads and 3,000 miles of forest trails located on these lands.

The Pennsylvania State Park system is becoming increasingly important to the citizens of the Commonwealth. Over 11,500,000 persons visited the 44 State Parks (101,087 acres), 48 Picnic Areas (920 acres), 12 Historical Parks (23,871 acres), and 13 State Forest Monuments (7,140 acres) last year.

Pennsylvania's famous system of Game Management Areas is likewise vital to the future of hunting in the Keystone State. As early as 1919 the Legislature approved the purchase of Game Lands and within a year the first tract was secured in Elk County. State Game Lands, open to public hunting, today total over 922,000 acres and the Game Commission is currently making every effort to expand this program further. Maintenance of these lands and the development of ideal food and cover conditions on them for wildlife requires great effort and long range planning. Timber is removed on a selective cutting basis, feeding shelters are built and kept supplied with winter feed, and millions of shrub and tree seedlings are planted each year.

THESE ARE OUR PUBLIC LANDS! Over one-quarter of the na-

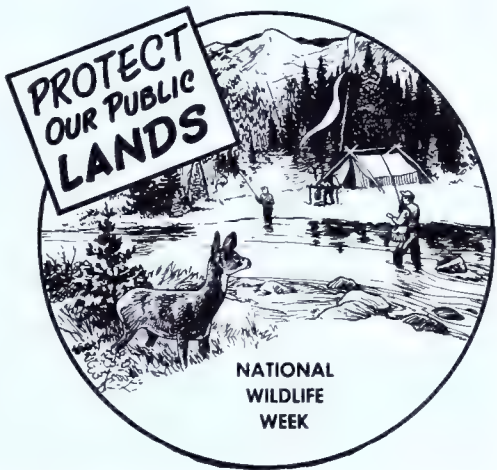
tion's area, they belong to us and our neighbors and to all of the people of the United States. They are a part of us, just as kinship with the wilderness was a part of those earlier generations of Americans who settled our country. It is to these lands that many of us must turn for a little of the feeling that comes from living "close to the land." Public lands also provide a diversity of the material things so essential to living in this modern age.

But just as we have grown to value the many benefits of this public estate, so must we begin to assume a greater responsibility for taking care of the land itself—the soils, water, minerals, plants, animals, scenery and wilderness. Our use of them must be keyed to a basic concern for these resources so that they can continue to satisfy our needs in the face of rapidly increasing pressures upon them.

Here are six courses of action you can follow to help protect our public lands:

- 1. **Make it your business** to learn about them, their uses and many values. Find out what public lands are near your home and within your state.
- 2. **Start educational campaigns** in your community. Interest your leaders in the protection and careful management of the public lands.

This article is based on information supplied by the National Wildlife Federation. Additional information on Wildlife Week and "Our Public Lands" is available from: Stewart M. Brandborg, Asst. Conservation Director, National Wildlife Federation, 232 Carroll Street, N.W., Washington 12, D.C. A set of 36 colorful Wildlife Conservation Stamps, ideal for gifts, collections, scrap books, etc., also may be ordered from the same address by enclosing a donation of at least one dollar.



3. **Show the people** who are using the public lands—ranchers, lumbermen, mining concerns, hunters, fishermen—that their "privilege of use" does not entitle them to abuse. Let them know that no user can be permitted to destroy or permanently impair the natural resources of these areas.

4. **Protect and defend** city, county, state and federal parks, forests, grazing lands, and wildlife areas from encroachments by special interest groups who seek personal profit at public expense.

5. **Get behind programs** of your public land agencies. Learn what they are doing, study the problems they are facing in making the most of our rich public land resources.

6. **Support the efforts** of private conservation organizations. With your help they can defend wildlife and recreational resources against attack from people who seek selfish ends or political gain.

SAVE OUR PUBLIC LANDS
FROM . . .
POLLUTION
EROSION
ENCROACHMENT ON
WILDLIFE REFUGES
FIRE

Everybody Knows About Wildlife Week In Fayette County

WHAT does Wildlife Week mean in your hometown? Do your children come home some evening with exciting accounts about a special program in school? Ever see any posters or exhibits along "Main" Street during this week? Ever hear it mentioned on radio or television, read about it in your local newspaper?

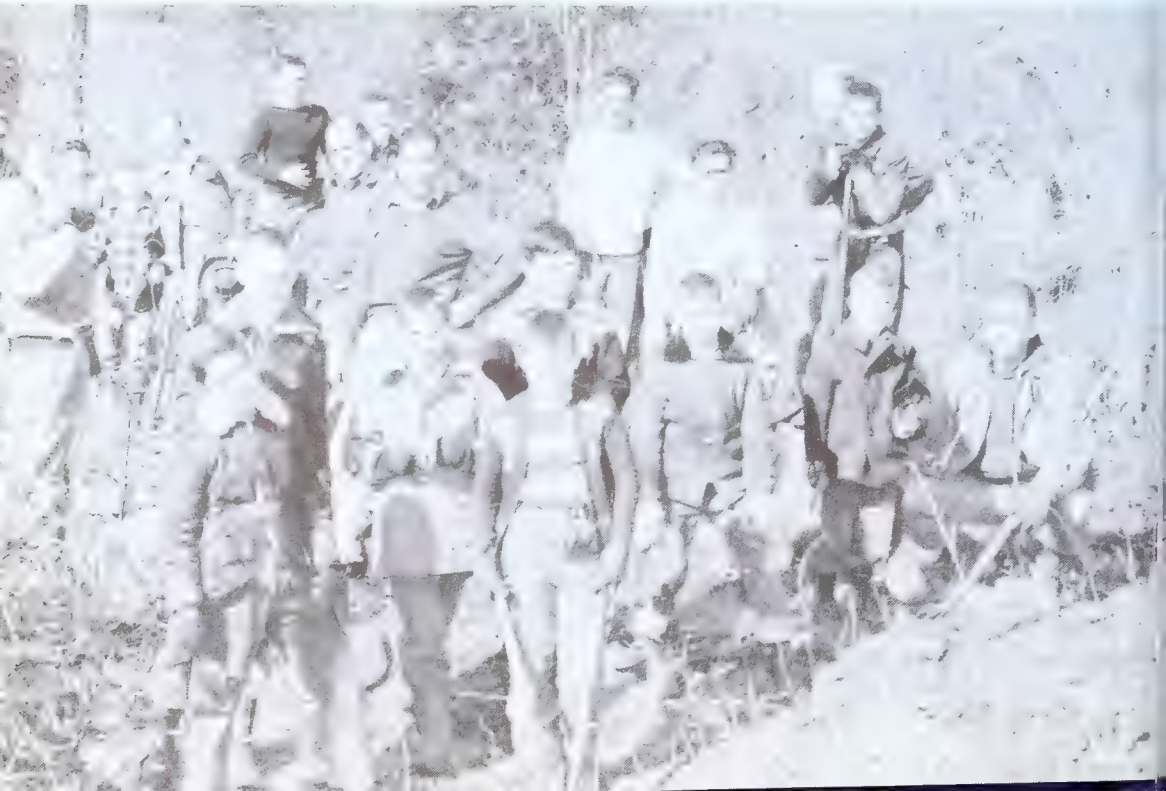
If you lived in Fayette County a year ago you did! In fact, from March 17-23 last year Fayette folks heard plenty about "Homes for Wildlife," the 1957 theme. Not just during that week, either. The message was repeated over and over again all year long.

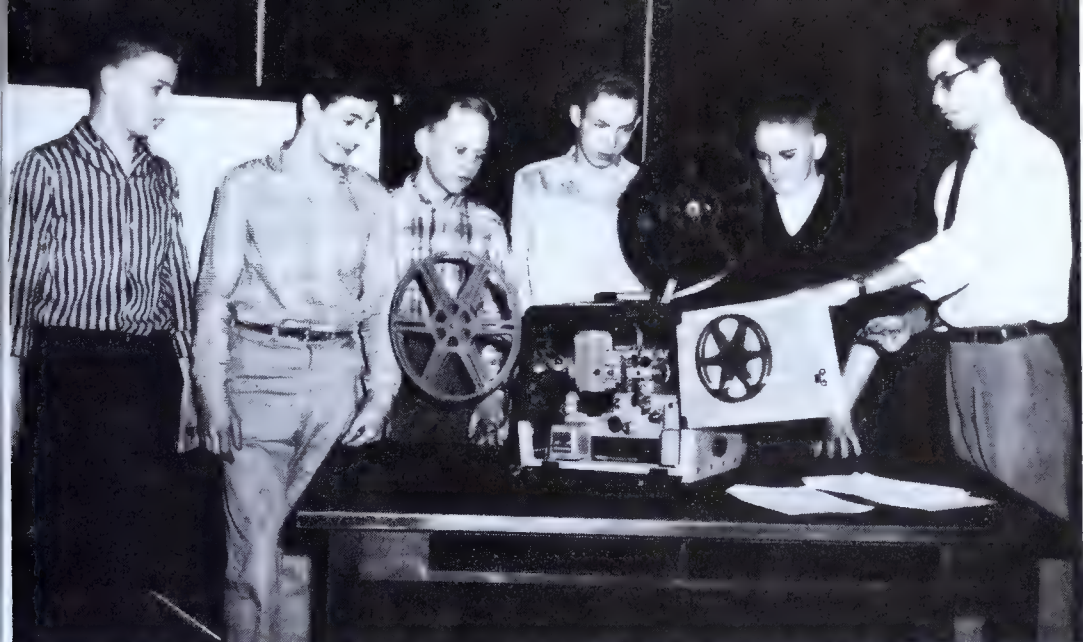
The Fayette County Conservation League, composed of 16 organized sportsmen's clubs with about 3,000

members, went all-out for wildlife week last year, as they are about to do this year. They used this special event, not just to call attention to the importance of hunting and fishing, but to basically dramatize the ideas they firmly believe in. Ideas like—our future existence depends on the conservation of our natural resources.

They had plenty of help, of course. The Fayette County Superintendent of Schools, the principals and teachers of their junior and senior high schools, the conservation agency field officers, the churches and civic clubs, the Scouts and their leaders, newspaper and radio people, merchants and individual sportsmen—all gave their complete cooperation and enthusiasm. But behind it all there was a dynamic Wildlife Week Chairman

HOMES FOR WILDLIFE was aim of Mountain Lodge Fish and Game Club at their property near Point Marion. Here boys belonging to local scout troops join club members and scoutmasters Albert Hall and Carl Zigler brushing out a boundary line which was later planted with multiflora rose. Brush piles were made from the cutting.





WILDLIFE FILMS were used to illustrate theme of the week in the Brownsville School system. Here Don Buttermore, faculty member, demonstrates use of movie projector to junior Hi-Y members who showed five films at junior and senior high schools during Wildlife Week.

—Walter Murphy, of Perryopolis—and a hard-working, dedicated committee. It consisted of: Harry B. Riffe and Glenn W. Irvin, Assistant Superintendents of Schools for Fayette County; Paul A. Keightley, instructor at the Connellsville Senior High School; Donald Buttermore, Jr. of the Brownsville Junior High School; Fuller Paull, instructor at the Hopwood Elementary School; A. W. Gruenwaldt, a Director of the Fayette County Conservation League; L. W. Secoy, and M. J. Mitchell, past presidents of the League; and Sol Michael, League Treasurer.

They set their goals high; they had major objectives for the Wildlife Week observance in Fayette County. Here's what they wanted to do:

1. To encourage youth to cooperate with the conservation education programs of their county schools, Scout and other youth organizations.
2. To help support local sportsmen's clubs that endeavor to provide "Homes for Wildlife."
3. To encourage each individual to do something constructive during Wildlife Week.
4. To have 100% of the Junior and Senior High Schools participate in observing National Wildlife Week.
5. To give county newspapers the

opportunity to publish conservation news.

6. To provide all radio stations with interesting broadcast material concerning Wildlife Week.

7. To make Wildlife Week a community affair.

8. To use Wildlife Week as a time to plan conservation work for the entire year.

And although space does not permit a complete report, here are some of the highlights of what happened throughout Fayette County during National Wildlife Week, March 17-23, 1957:

Every school participated in observing Wildlife Week in some way. These public schools included the Masontown High School, Point Marion High School, Bellmar High School, Marion Junior High School, Vernon Junior High School, Brownsville Senior and Junior High Schools, Connellsville Senior and Junior High Schools, Dunbar Township High School, Fairchance Borough High School, Georges Township High School, German Township High School, North Union Township Senior High School, Perry-Lower Tyrone Joint High School, Star Junction Elementary School, Redstone Township High School, South Union Township



BIRD HOUSES AND FEEDERS were a special project of fifth and sixth grade pupils at the Star Junction School during Wildlife Week. The pupils constructed 65 houses and 12 feeders under the instructions of their teacher, Walter Murphy and principal, William Baker.

High School, Union Joint Vocational High School, Uniontown Senior High School, Ben Franklin Junior High and Lafayette Junior High. Seven of these schools have regular conservation classes and five have conservation clubs.

During National Wildlife Week 12 of these schools had exhibits of mounted wildlife specimens, 7 had live animal exhibits, 6 planted shrubs, 7 planted trees, 13 built a grand total of 737 bird houses, 11 schools built 76 bird feeders, 3 built a total of 20 animal feeding stations, 5 schools distributed about 60 bushels of grain as winter feed, 9 demonstrated hunting equipment, 7 demonstrated fishing equipment, 12 schools took field trips, 11 had a wildlife week unit on "Homes for Wildlife," 19 schools had classes study and discuss the theme, 22 schools displayed printed posters, 16 displayed original

posters drawn by students, 13 schools had movie programs on the theme, 5 schools used film strips, 4 used slide lectures, 2 schools had special programs over their public address systems, 9 schools had a special Wildlife Week assembly program, one school's rifle team took first place in the Pennsylvania Sportsmen's Show at Harrisburg and two schools had students winning honorable mention in the State's Conservation Essay contest for youth. In all, 7,500 students participated in the activities connected with National Wildlife Week.

Among the sportsmen's clubs, many outstanding events were staged in observance of Wildlife Week. The Mountain Lodge Fish and Game Club, of Point Marion, sponsored a bird house building contest for Cub scouts and school children, displaying the winners in a local store window. Club members joined with

a scout troop to spend one entire day during the week building brush piles for wildlife homes. The First Methodist Church of Point Marion also co-operated, with Rev. O. Lloyd Hutchinson conducting a special sermon in connection with Wildlife Week.

The Breakneck Rod and Gun Club held a dance and banquet, built a large feeder for deer in the Buck Run area, liberated pheasants, helped Game Commission personnel liberate 6 deer live-trapped and transferred from elsewhere in southwestern Pennsylvania, liberated 100 bob-white quail (50 of which were purchased by the club), helped stock 4,000 fingerling trout. The Fairhope Rod and Gun Club decorated their club room in keeping with the week's theme and each evening had a special program with about 80 people in attendance. They also planted wildlife

food and cover, distributed 20 pounds of corn as feed, participated in a rabbit live-trapping and transfer program, showed 12 different movies on the theme and demonstrated hunting and fishing equipment.

The New Salem Rod and Gun Club drew the attention of many Fayette County people with their outstanding wildlife exhibits.

Yes, it was quite a week in Fayette County last March. It will be just the same, if not better this year. Wildlife Week there means a lot and involves many people. But to the officers and members of the Fayette County Conservation League, led this year by President Walter Murphy, Vice-president Fuller Paull, Secretary Wm. Dale Wilson, and Treasurer Sol J. Michael—Wildlife Week is but an opportunity to activate their motto—"To think right and to do right."

TREE PLANTING PROJECTS, a highlight of Fayette County Wildlife Week activities, are making more homes for wildlife every week of every year. Here Boy Scouts from troops in Greensboro and Mapletown are planting 4,000 evergreens and shrubs at Camp Delico in the spring of 1956. Left to right, kneeling: Larry Blout, Jerry Blout, Game Protector Alex Ziros, Roy Yanosh, Scoutmaster Stanley Papuga, Ronald Gregan and Vaughan Mikler. Standing: Ronald Gibson, Bill Davis, Paul Valli, John Zalar, Joseph Billetz, Alex Kayla, Richard Humbert, Jim Minor and John Beall.





A Hunter's Look At The Game Commission's New Executive Director

What Manner of Man is Mert Golden?

By Joe Carricato

The author of this article is well-known throughout central Pennsylvania as outdoor columnist for the (Harrisburg Patriot-News). His forthright style of reporting events and viewpoints in the outdoor and conservation field shows independent thinking and a sincere desire to "call the shots" as he sees them.

WHAT manner of man is this Mert Golden, the recently appointed Executive Director of the Pennsylvania Game Commission?

To be sure, last month's issue of GAME NEWS carried an up-to-date photograph of the man. The accompanying article was rather complete, as official announcements go. And yet, because of its formal nature, it

had to be impersonal. It could not, for example, emphasize the interesting fact that Golden is only the second of ten Game Commission Executive Directors to have come all the way up to the top from the field ranks. The other man, incidentally, was John J. Slautterback of Harrisburg who served in the position from 1929 to 1931. Seth Gordon, now Director of California's Department of Fish and Game might also be considered a product of the ranks. But his lower-rung jobs with our Game Commission were mainly clerical. And the big question still remains: what manner of man is Mert Golden?

The "new man" is already undergoing the rigors of the banquet circuit to meet as many sportsmen as possible. But there'll be thousands of hunters who will never get the chance to see and talk with him. They may well wonder: Is he a mild-mannered man? Outspoken? Has he been an "armchair expert" since leaving the ranks of the field force? And finally the jackpot question: what does he really know about Pennsylvania hunting and hunters?

My acquaintance with Golden goes back only several years. But this much I know without further legwork (a reporter's term for running around gathering material for an article): Mert comfortably clears the first and most formidable hurdle in the way to acceptance by our Commonwealth's hunters. He's not strictly a desk man; he most certainly is an active hunter; he understands hunters; he talks their language and shares their problems. That's for sure.

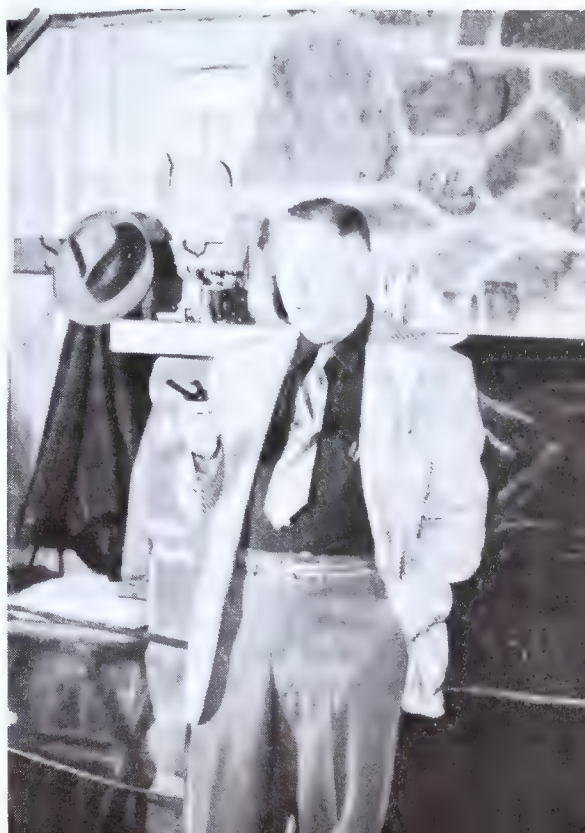
The new executive director began hunting back in 1916 at the age of 14. The young coal cracker's interest in the sport eventually led to his appointment as a per-diem deputy game protector on August 6, 1929.

But let's get to hunting and such

things: what's his dish? Name the species, Mert has probably hunted it at one time or another. He has hunted all over the Commonwealth; over practically the entire Atlantic Seaboard; in South Dakota; Wyoming; and Canada.

After his Wyoming trip in 1956, an eye-witness told me how a native guide watched open-mouthed as Mert calmly dropped an antelope with a single shoulder shot from some 250 or 300 yards up a mountainside—and we all know those downhill shots are not the easiest. "You guys," said the guide, "have to come all the way from the East to show us fellows how to shoot." According to the eye-witness, the shot required some quick calculating too because of a brisk wind through the gulch.

During his days as a game protector, Mert's favorite hunting was with a 'scoped 22. To slip quietly into a woods to pick off squirrels



fit in with the job of checking hunters.

At the present time, Golden's favorite weapon for small game is a 12-gauge, gas-operated, auto-loading shotgun with interchangeable barrels, modified and full choke. For general small-game use, the modified barrel is used and the preferred load is $3\frac{1}{4}$ — $1\frac{1}{4}$ in $7\frac{1}{2}$'s. When it is decided to hunt only for ringnecks, then high brass 6's are used.

For waterfowl, Golden uses the same auto-loader, substituting the full-choke barrel. He likes the magnum 4's for ducks and magnum 2's for geese.

The same semi-automatic is used for grouse, doves, and quail, with the modified choke and low-brass shells. The loads are $7\frac{1}{2}$'s for grouse and doves; either $7\frac{1}{2}$'s or 8's for quail.

At crow hunting, one of his favorite sports, Golden really shines. After having been out with him, I can personally attest to that, as can Al Bachman, one of the Game Commission's most accomplished woodsmen and a frequent companion of Mert's on crow-calling expeditions.

Bachman especially likes to recall the incident involving himself, Mert and the late Harry Hostetter, a well-known Lancaster County sportsman-conservationist.

Hostetter had been expressing doubts about crow calling. He had read all about it and he had been out with supposed experts. "I have yet to see crows come in to a call; if you can show me how to do it, I'll pay for all the shells we use," bargained Hostetter. That was a bum bargain, if he had only known it.

When the 'show me' session was over, Golden had killed 117 crows; Bachman about 120; and Hostetter, 30—a total of 264 crows. Bachman doesn't know how many more shells were used. The crows were coming right down the barrel that day so there wasn't too many misses. None-

theless, Hostetter paid a bigger ammunition bill than he had figured on. And this was in the World War II days when shells were hard to come by at any price.

Mert uses an over-and-under double for crow hunting; he used it on my hunt with him. He always uses that particular 12-gauge because he has an immediate choice of modified or full choke barrel. Crow shooting presents just about every conceivable angle of wing shooting, including those fast "way out there" shots. Mert particularly likes those long shots which is why he uses high brass No. 6 shot. That's rather expensive but it's also more self-satisfying and more humane in the final results. Of course, when the black rascals are pouring in at close range to investigate the man-made calls, Mert, like the rest of us, will economize with cheaper trap loads. Incidentally, that over-and-under double is the favorite for trap shooting, another game at which the new director is no slouch.

And now for rifle shooting—big game hunting and varminting. In 1955, Bill Wolf, nationally known outdoor writer, needed material for a piece on woodchucks which was eventually used in the *Saturday Evening Post*. It was Golden whom Bill approached for all the necessary woodchuck lore. And it was Golden who took the writer out into the Adams County countryside, hard by President Eisenhower's farm, to illustrate how an expert drops the whiskered whistle-pigs at 300 yards and then some.

In character with all the veteran 'chuck hunters, Golden has long since graduated from the "take anything" class. He goes only for the distances—the kind of shooting where the hunter has to make like Univac, figuring safety, wind velocity, range, trajectory, this and that and so forth.

For the 250 to 400-yard woodchuck shots, Mert's weapon is the popular 244 caliber rifle, mounted with a 10-power scope. When the 'chucks begin

popping out of their homes with regularity, Golden carries in his car all the accouterments of this specialized sport.

In addition to rifle and scope, the gear includes two gun rests, one for prone shooting in short grass and one for shooting in higher cover; field glasses; a hook for hanging the 'chucks for skinning; skinning knives and sharpening stone; and an icebox for the day's vittles. Add the hand-loading equipment at home (Mert has been a "bug" on handloading from way back) and you have a sizeable investment for this hobby. Of course, this specialized equipment was accumulated over a number of years.

For maximum distance shots at 'chucks, Golden uses a 234 varmint—an eleven-pound heavyweight, mounted with a 12-power, super-target scope. (You can appreciate now why a gun rest is used.) The ammo for this rifle is an 85-grain Sierra spitzer, backed with 45 grains of 4350 Dupont powder.

And now for deer. Pressed for an estimate of deer to his credit, Golden estimated he has taken about 35—bucks and antlerless—in regular deer-season hunts. He killed his first deer in 1919. For deer and bear hunting, Mert uses a 308 caliber, bolt-action rifle; 150 grain Sierra soft point; 47 grains of 4320 powder. With this particular combination, he has taken whitetails, mule deer and black bear. He has taken three black bears in his hunting career.

We've all heard, I'm sure, that cynical question so often directed at wildlife officialdom, "What does he know about hunting, sitting at that desk?" We hope that question has been satisfactorily answered in this instance. This has been no attempt to "build the man up to the job." The facts were reported as the "leg-work" revealed them, just as my out-

door column will continue to do even though it may require taking issue with Golden or anyone else.

In the disposition department, Golden is not the back-slapping, gushing, glad-hand type. He apparently gets along well with everyone, in and out of the Commission—and we all know what a variety of characters one meets in this wildlife-conservation field. Intimates speak of his quiet manner but they admonish "just don't push him too far." For myself, I've always liked his straightforward answers—an unbureaucratic trait which we hope will not change.

Golden doesn't possess a college degree. "The more to his credit," said one department official in referring to Mert's climb up the ladder without benefit of academic background.

His conversation; his correspondence; his disposition of administrative problems, particularly those involving people; his grasp of academic and practical Pennsylvania wildlife problems—these things bespeak of training which qualify Golden for the job at hand.

Because Mert Golden is a hunter; because he has more than 600 medals and trophies for pistol championships; because he has handled well all the administrative chores given him thus far; because he gets along with all factions—all these "because," we realize, do not guarantee that Golden is going to solve the State's complex hunting problems. But if we were betting on his chances of doing a good job, all those things would tip the odds in his favor.

Undoubtedly, directorship of the Pennsylvania Game Commission is the toughest target Mert has ever faced, a Golden opportunity (if you'll excuse the pun). Here's hoping he gets on target and follows through as he does so efficiently in wing shooting.



WALKIN' SHOES

By NED SMITH

What Hawk Is That?

By Ned Smith

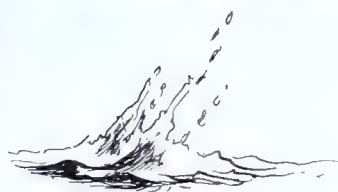
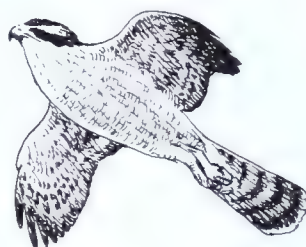
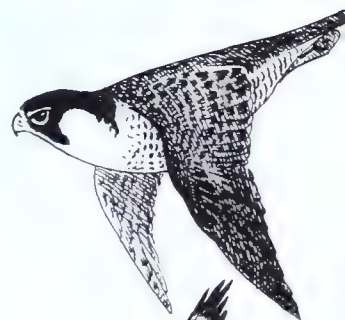
MARCH'S half-hearted promise of warmer weather is sufficient to start the hawks back to Penn's Woods from their wintering grounds to the south. Ranging in size from diminutive sparrow hawks to gangling ospreys they drift homeward by the thousands, the hardiest species first, the less hardy ones as late as April or May.

To the outdoorsman who finds something of interest and value in all living things these birds of prey are a constant source of wonder and delight. The fellow, on the other hand, who believes "hawks is hawks" is just kidding himself—and is missing a lot of fun to boot. Perhaps the following quiz will convince him that there are hawks—and then there are hawks. (The answers appear at the end of the article.)

1. Which is our speediest hawk?
2. Other than size, what is the chief difference between the Cooper's hawk and the sharp-shinned hawk?
3. What hawk lives almost entirely on fish?
4. Name two hawks that invade Pennsylvania from the north in winter.
5. Name the small hawk that is often seen perched on wires and poles.
6. What hawk feeds largely on ruffed grouse?
7. What is the preferred food of the big red-tailed hawk?
8. Name the long-tailed hawk with a white rump that is often seen winging low over fields and meadows.
9. Which of our hawks is almost identical to the peregrine falcon of falconry fame?
10. What large hawk is almost entirely black?

If the above quiz has whetted your appetite for a closer acquaintance with the hawk tribe, you'll first want to be able to identify the different species in the field. Detailed descriptions tend to be confusing, so only the identifying characteristics have been emphasized in the following explanations and illustrations.

The first step in identification is to decide to which group the bird in question belongs—viz., the accipiters, the buteos, the falcons, the ospreys, or the harriers. Each group has characteristics that should be memorized before attempting field identification. The field marks that distinguish one species from another within the same group are a bit more complex, but can easily be learned. Because immature hawks are often quite different from their parents in color and markings they can be troublesome. Just remember that in size and shape they are identical to the adults. Immature birds are usually brown above and streaked below; mature birds are generally gray or brown above and most are barred beneath.



CAN YOU NAME THEM ?

EACH SPECIES OF HAWK HAS CERTAIN "FIELD MARKS"—PHYSICAL CHARACTERISTICS THAT DISTINGUISH IT FROM OTHER SIMILAR SPECIES. ONCE YOU'VE LEARNED THEM YOU WILL FIND IDENTIFICATION OF THE ABOVE BIRDS SURPRISINGLY EASY.

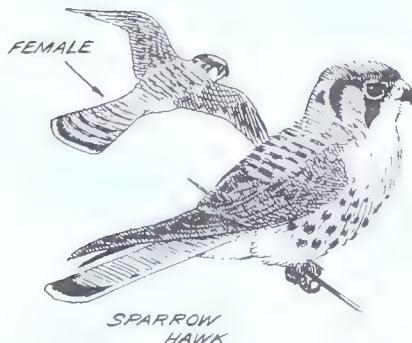


FALCONS

Falcons can be recognized immediately and unquestionably by their long, **pointed** wings, a characteristic shared by no other hawks. Their tails are long. Falcons are swift fliers, beating their wings rapidly and deeply. Three species are found in Pennsylvania—two small birds and one large one.

Sparrow Hawk

This little falcon is the one commonly seen sitting on a telephone wire or pole, nervously twitching its tail. It is little larger than a robin, and feeds chiefly on grasshoppers in the summer and mice in the winter. In the warmer parts of the state it is quite common in winter. The sparrow hawk's cry of "Killee, Killee" has given it the nickname, "Killy nawk." This bird is the only small hawk with a reddish brown tail.



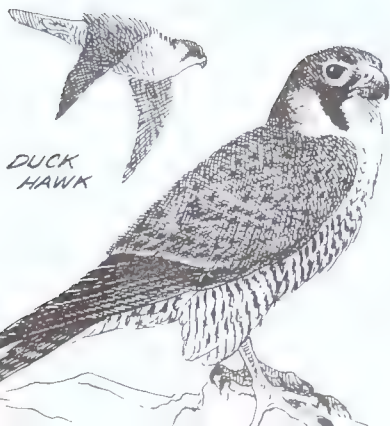
Pigeon Hawk

This bird is nearly as small as the sparrow hawk, but can readily be distinguished from the latter by its gray or gray-brown tail. It probably does not nest in Pennsylvania, and is rarely seen even in migration. This swift little falcon is quite addicted to eating small birds, but is so rare that its depredations have little effect on avian populations.



Duck Hawk

Our largest falcon, the singularly handsome and powerful duck hawk attains a length of about twenty inches, too large to be confused with any of our other falcons. At close range its "mustache" marks are a reliable field mark. It is our fastest hawk, dropping on its prey at an estimated speed of close to 200 miles per hour and striking it with its closed "fists." It also captures birds by direct pursuit. It is nearly identical to the peregrine falcon of the Old World which was the favorite hawk of old-time falconers. This striking bird is quite uncommon in Pennsylvania.



ACCIPITERS

These birds have **long** tails and **short**, rounded wings. They frequent forested areas and capture their prey by short, quick dashes, frequently following their victims into the thickest cover. Because they are prone to feed more heavily upon birds and game than upon rodents the members of this group are usually looked upon with disfavor. Three species are found in Pennsylvania.

Sharp-shinned Hawk

This little blue gray hawk with rusty barred underparts is close to the sparrow hawk and pigeon hawk in size, but has short rounded wings instead of long pointed ones. It differs from the very similar, but larger, Cooper's hawk in having a square-tipped or slightly forked tail, while the tail of the Cooper's hawk is rounded. This accipiter is the nemesis of small birds.

Cooper's Hawk

This bird averages larger than the sharp-shinned hawk, otherwise it is very similar. The rounded tail is a good identifying feature. Immature birds are dusky brown above, whitish streaked with brown beneath, but shape and proportions of tail and wings will readily identify them.

Goshawk

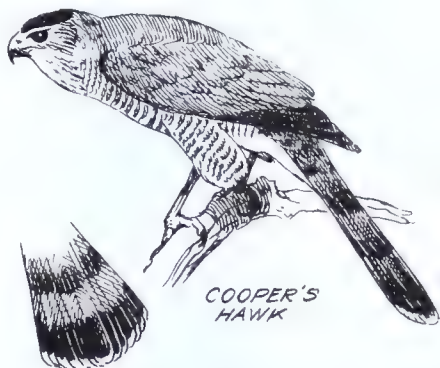
A huge, gray hawk, up to two feet in length. Size alone distinguishes it from our other accipiters. Immature birds are brown with black-streaked white underparts. Most goshawks seen in Pennsylvania are winter visitants from the north. They rarely nest in this state, which is fortunate, for the goshawk is probably our most destructive bird of prey. It is particularly fond of ruffed grouse, but will readily take rabbits, pheasants, or poultry.



ACCIPITERS



SHARP-SHINNED
HAWK



COOPER'S
HAWK



GOSHAWK

NED
SMITH



BUTEOS



RED-TAILED
HAWK



RED-SHOULDERED
HAWK



BROAD-WINGED
HAWK

BUTEOS

These hawks are characterized by their short tails and rounded wings of moderate length. They are chunky in appearance and are not nearly so speedy or agile as the falcons or accipiters. Much of their time is spent either in perching on a fence post or tree limb, or in soaring in circles high in the sky. These are among our most beneficial hawks, feeding for the most part on mice, rats, snakes, and insects.

Red-tailed Hawk

Our largest common buteo, averaging close to 24 inches long. Adults can be readily identified by their bright orange-brown tails. Both adults and immature birds have a characteristic white patch on the chest and upper breast. In adults the patch is frequently crossed by a faint row of short dark streaks. It lacks the conspicuous black "wrist" mark on the underside of the wing found on the rough-legged hawk. With us the year 'round, the red-tail is one of our best mousers.

Red-shouldered Hawk

Smaller than the red-tailed hawk, the red-shoulder is not as common in winter. Adult birds are heavily barred beneath with rusty, and have reddish brown "shoulders." The tail is banded with 5 or 6 black bands and narrower white bands. Immature birds may not have red shoulders, but can be identified by the pale patch near the end of each wing, visible from above or below.

Broad-winged Hawk

Our smallest buteo, about the size of a crow, but chunkier in build, of course. Like the red-shouldered hawk this bird is barred beneath with rusty. The tail is crossed with three wide black and two white bands of equal width. The width of the white bands distinguishes this bird from the red-shouldered hawk. Immature birds do not have the red-shoulder's pale "window" in the wing, and should not be confused with the red-tail in any plumage because of their small size.

Rough-legged Hawk

A rare winter visitor from the North, the rough-leg is our largest buteo. It occurs in two color phases. In the dark phase the plumage is black, the basal part of the tail white. In the light phase the upper parts are streaked tan and brown, the underparts pale buffy, with a sooty band across the belly. The basally white tail is present in this color phase, too. The dark phase is unmistakable. The light phase can be easily distinguished from any other buteo by the black "wrist" patch on the underside of the wing and the partially white tail.

OSPREYS

Osprey

The osprey, or fish hawk, is our sole representative of this group. It feeds entirely upon fish, and is seldom found far from water. The striking coloration—black above and white below—and long, crooked wings which sometimes span six feet give the osprey a distinctive appearance. His voice is a sharp whistle.

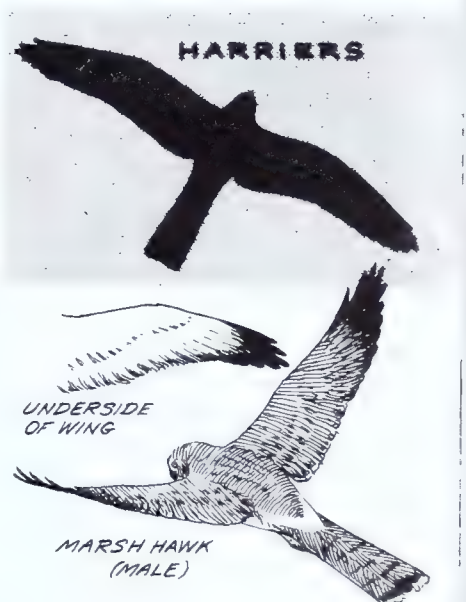
HARRIERS

Marsh Hawk

A common sight in many parts of the state away from the mountains is the graceful marsh hawk flying its beat just above the weed-tops. The long, narrow wings, long tail, and generally slender appearance, coupled with the conspicuous white rump patch makes identification simple. The male is pale gray above, whitish beneath and the female and immature are brown.

ANSWERS TO THE QUESTIONS

1. The duck hawk.
2. The Cooper's hawk has a tail with a rounded tip, the tip of the sharp-shinned hawk's tail is square or forked.
3. The osprey.
4. The rough-legged hawk and the goshawk.
5. The sparrow hawk.
6. The goshawk.
7. Mice and rats.
8. The marsh hawk.
9. The duck hawk.
10. The rough-legged hawk in its dark phase.





Penn State's Conservation Education Workshop

A Credit Towards Conservation's Future

By Joseph E. Simon

UNTIL last Spring, when Edison Rice, President of the Westmoreland County Sportsmen's League asked me to attend the Conservation Education Workshop for Teachers at Penn State, I didn't know how such a Workshop ever existed. In fact, like so many others, I felt that conservation was a responsibility of the sportsmen in as much as its primary purpose seemed to be to provide good hunting and fishing for the sportsmen. I never dreamed of its many ramifications and how our existence as a nation depended upon a sound conservation policy.

After listening to Edison tell about the lectures and field trips associated with the Laboratory, I began to see how vast and essential Conservation Education was and how important it was for a teacher to be properly

grounded in the basic facts regarding conservation. I immediately mailed my letter of application to Professor Herman Kranzer, Director of the Laboratory. In due time a letter from Professor Kranzer brought the good news that my application had been approved and that I should report for the first session from July 1st to July 20th.

A get-together luncheon was planned for Sunday evening, June 30th. Being anxious to meet my future classmates I packed my outdoor equipment in the car, said goodbye to the family and headed the Ford in the direction of State College. Three hours later I was ringing the doorbell at the comfortable fraternity house, summer headquarters for the Laboratory. The Laboratory Secretary admitted me and

ushered me to the dining room where the other teachers had assembled. A quick glance about the room proved to me that Conservation Education was not the responsibility of any particular age group or sex. Neither was it the responsibility of any particular subject teacher or teacher from a given area; it was the responsibility of all teachers.

Here in the dining room were my classmates—men and women from every section of Pennsylvania. Several of them had just completed their first teaching year and were going to use the credits to make their teaching certificate permanent. Others had taught for 5 years and would apply their credits toward their Master's Degree. Here were others who had taught for more than a quarter of a century; they had their Master's Degree and were studying Conservation to enable them to render a greater service to their Communities.

There sat Sally Krommes from Allentown, George Dunkle from Schwenksville, Vera Spencer and Florence Cook from Philadelphia, Paul Bohner from Dalmatia, Joe Pecchia from Avis, Elizabeth Rifenberrick from Oil City, Robert Jones from Pittsburgh, and Connie Silveus from Waynesburg. Among my classmates were 1st and 2nd grade teachers, 5th and 6th grade teachers, and Junior High and Senior High school teachers. I could not help but see in their faces their great love for living things.

After the meal was over we assembled in the lobby to get acquainted and to receive further instructions. The ladies were assigned to rooms on the second floor and used the main stairway; the men were assigned rooms on the third floor and were asked to use the stairway in the back of the building.

FIRST FIELD TRIP took teachers to study rock formations and present day use of mineral resources. Here they view operations at a stone quarry and crushing plant near Bellefonte.





OUTLOOK ON THE FUTURE was given these teachers at the Conservation Education Laboratory. The group contained a wide variety of teaching backgrounds, interests and viewpoints.

Monday morning we completed our registration and after lunch we were given a bird's eye view of Conservation by the Director Herman Kranzer and his two assistants, David Lockard and Audrielle Lynch. Then came the real objective of the Laboratory, the Conservation of Pennsylvania's Mineral Resources, by Dr. Larry Whitcomb, Professor of Geology at Lehigh University. His was the first week of the Laboratory. Vividly his lectures portrayed the geological formation of Pennsylvania. How, during the past 2 or 3 billion years, the rocks erupted to form synclines and anti-clines that resulted in mountains, hills, and valleys, and how the ocean came in to cover most of the State, left its deposits, and then receded to come in again.

To Larry, as we affectionately called Dr. Whitcomb, Conservation was life. He believed it, he loved it and he lived it. All who attended his classes absorbed his enthusiasm and his sound philosophy of Conservation; namely, "The wise use of our Natural Resources."

The next day we boarded the bus

for our first field trip to study rock formations near State College and Bellefonte. Rocks we once passed by as having no particular value, now held special secrets for us. By knowing what to look for, we learned to identify the various rocks and to know their significance. We found rocks containing the fossils of sea shells, mute evidence of the oceans coverage of our State. We saw rocks being quarried, crushed and screened, and learned that some of the larger sizes would be used for road beds, the small sizes for concrete aggregate, and the fine particles for asphalt road topping. Limestone was pulverized or burned to be used by farmers to correct soil acidity and supply calcium to growing plants.

During subsequent lectures Dr. Whitcomb told us how coal was formed and how it was removed from the earth. So that we would understand clearly the processes of coal removal, we visited coal stripping operations and saw giant drag lines, bulldozers and power shovels removing the over burden from veins of coal. Although coal stripping tem-

porarily tears up the land, it does make possible the economical removal of millions of tons of coal that would be almost impossible to remove with normal mining methods. At the spot where the drag line was at work, a one foot vein of coal was removed, then more over burden was taken off and the large vein of coal was exposed.

Backfilled areas can, with the proper methods, be returned to almost normal crop production within a few years, or they can be reforested to provide lumber for future generations as well as cover and food for wildlife.

The study of coal would not have been complete without going into a mine. So, arrangements were made for us to enter a coal mine near Morrisdale. All of us were provided with a safety hat and a miner's lamp. We went down step by step until we reached the diggings approximately 275 feet below the surface. It was the first time most of the teachers had ever gone into a mine. And, what a feeling it was to stand on the spot where millions of years ago, luxuriant plants grew and since were covered with earth and compressed into coal.

Whenever a field trip kept us away from the Fraternity House during the lunch or dinner hour, we would have a "cook out." Of course, Prof. Kranzer

would foresee such occasions and have the cook pack pounds of hamburger or lunch meat, pans of escalloped potatoes and baked beans, baskets of fruit and gallons of lemonade. The field trip over, we would stop at a public picnic ground and enjoy a wonderful meal in the open. We always took along what seemed to be a tremendous amount of food, but very little of it ever found its way back to the kitchen. We could never quite figure out what happened to all of it.

Classes were officially called off for the 4th of July and most of the students took advantage of the break to visit their families. Those of us who remained at the Fraternity House, including Dr. Whitcomb, decided to explore the area near Bear Meadows, a treacherous swamp on top of a mountain. We were not content to stay on the beaten path, thinking the least traveled spots held the most surprises—they did, muddy shoes.

Friday was our last session with Dr. Whitcomb and it was with a deep feeling of regret that we said goodbye to him and watched him drive out of sight. He had given us the true meaning of Conservation and how important minerals were to the prosperity of Pennsylvania and the defense of our Nation.

. . . To Be Continued





How to Break-Up A Dog Fight

By Herm David

ALTHOUGH there probably is less danger of an infection from a dog bite than there is from the bite of any other animal—any bite can be dangerous. Often the wound is a deep one of the puncture type. If rabies is at all a possibility, it should be permitted, even encouraged to bleed to a reasonable extent.

Probably the best antiseptic for first aid is hydrogen peroxide in medicinal strength. Let this antiseptic reach down into the wound and clean it of bacteria. If peroxide is not available, some other antiseptic such as alcohol can be used. Whiskey—in the wound—can be used in an emergency. Consult a doctor at the earliest possible moment.

If bitten by a wild animal, try to catch the animal alive so it can be observed for signs of rabies. If it's not possible to capture the animal, take it in dead. Rabies is seldom spread from dog to dog, but from wild animal to dog. If any domestic animal is bitten by a wild animal or an unknown dog or cat, isolate it and have it observed by a veterinarian. Remember that the incubation period of rabies can stretch up to 100 days or more. It's best not to take a chance with a disease that is invariably fatal unless promptly treated.

The dog's wounds resulting from a fight should be treated in the same manner as a human's. Long tears and excessive bleeding should be imme-

diately treated by a veterinarian.

Old-timers agree that the best way to break up a dog fight is not to let it get started. If you are forewarned about the most dangerous situations it may be that you can avoid the necessity of ever having to stop a hateful, slashing quarrel.

Any time two males are together, one of them is going to be boss. That doesn't mean that there will always be a fight. They'll size each other up quickly. One or the other may issue a challenge, usually almost imperceptible. If that challenge is accepted, away they'll go. Thus it is well to remember that anytime two males are introduced, a danger period follows. If a female, in or out of season, is present the chances of a fight are multiplied. If one or both are terriers, the incidence will be higher since terriers have been bred to fight and kill either game or—and it's still done—other dogs.

The remedy is to hold two males which are to be placed together out of the reach of each other until a peaceful behavior pattern can develop. Then, hold them on-leash until they can complete their round of exchanging smells. Do not relax your guard during this period, but watch for any sudden move.

Male and female will seldom fight over anything except food—unless it



"—THE MALE WILL USUALLY TAKE AN INSUFFERABLE AMOUNT OF HEN-PECKING."

is affection. The male will take an insufferable amount of hen-pecking—and the female will go right on being boss. If both sexes are to be kennelled together it is well to train them, from the beginning, that each has its own food pan and that the other is not to touch it. They should, of course, be fed simultaneously. For the first few days it would be wise to watch the dogs until all of the food is gone. We've all heard of the 'bone of contention.' Well, if you wish to avoid fights in your kennel, don't offer a tid-bit without giving the kennel-mate the same. And—try to apportion the size of the tid-bits so that one dog will not finish before the other.

Dogs can become very jealous of each other when it comes to receiving attention from people. Share your attention and avoid lighting any canine powder kegs.

Two males are almost always all that can safely be kept in a single run. Unless you want trouble. And—young dogs should never be kennelled with older dogs—or larger dogs. If they aren't starved, stomped or torn apart, they can still become so cowed that they are worthless.

A special problem is always faced in breeding dogs—with a considerable chance that either the male or an attendant can get bitten. There's no



danger of a fight. I've never heard of an instance where a male would even attempt to defend himself under such circumstances. But the female can sure be ugly. It is a wise precaution to put a secure muzzle on her before the operation starts. Most owners of valuable studs insist upon this precaution.

Any police officer, and any experienced kennel man can tell you that there is no fight more vicious and more deadly than one between two females. Sometimes it seems that they don't even need a reason. Those that have been the best of friends seem to be capable of the most hate. Female kennel-mates can go along for months, building up resentments and jealousies against each other. Then some little incident will trigger them. It could be food, attention, or just the wrong time of the year. Such a fight is bad enough when just two females are involved. But if a third female is in the same run she will almost always lend her slashing teeth to the melee.

So, once again, it is well to remember: Never quarter more than two dogs in a single run. And beware of trouble between female kennel-mates.

This does not include a litter of puppies. They strengthen themselves with their playful wrestling and with

what one breeder refers to as 'playing teeth.' However, they should be watched at feeding time to be sure that each is getting enough to eat. If one is a little weaker than the others and thus doesn't get its full share of food, it will continue to grow weaker and may even starve. Once the second teeth are firmly rooted in the lower jaw and sexual maturity begins, litter-mates can be as dangerous to each other as to any other dog.

But—how do you stop a dog fight once it is started?

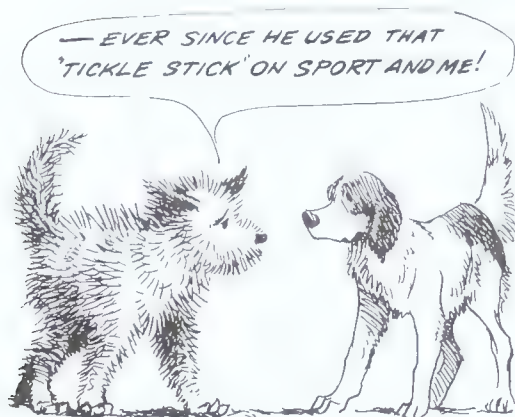
The first rule is: Don't get bitten!

The cruelest thing you do is let the fight continue while you try gentle means of breaking it up. Drastic action is called for and drastic means should be used. The best device known to this writer is an electric cattle prod, sometimes called a 'tickle stick.' This shocking rod will not hurt the dogs, but it will scare the bejabbers out of them. If either has a hold on the other, the shock will reach both of them equally and they will let go. Once separated, the dogs should be kept apart—forever.

The shocker is long enough to reach the dogs without sticking hand or arm into the mess. With it you have only to touch any part of either dog. You don't have to reach into the area of flashing teeth.

The 'tickle stick' should be, but isn't always handy. An old newspaper almost always is. Roll it loosely and make a torch of it. Stick the flame right under the jaws of the combatants. But—beware that one or both of them doesn't turn on their new tormentor—you.

Some old-timers prefer to grab a fighting dog by what would pass for his rear ankles and spread the rear legs until the animal turns his attention from the fight, then pick him up and throw him as far as you can. You can just hang on—if you're prepared to keep spreading those legs until the dog abandons all thought of turning on you. Someone else



should be treating the other dog in a similar manner or he will try to kill the now-defenseless dog you are holding.

If there is a supply of water handy you can try dousing the combatants, but this is seldom a drastic-enough remedy. It's better to pick up a club (not a stick unless they're pretty small dogs) and beat them until the fight goes out of them. Better be prepared to defend yourself, though.

It's useless and senseless to use a stick to try to pry a dog's mouth open when he has a grip. If you have a stick big enough to do that job, use it to knock the dog senseless. Your act will, ultimately, prove to be the greater kindness.

One old-timer, a great breeder and showman, told the writer he prefers to stick a red-hot cigar under a dog's tail. While it is assumed that a lit cigarette would serve as effectively, the thought is that anyone trying this one had better be fast afoot as it is a certainty the victim is going to come flashing around with teeth reaching for the hand that held the embers.

Another 'cure' for dog fights involves blowing in a dog's ear on the theory that pressure on the ear-drum will force the dog to open his mouth to permit the pressure to equalize. Something like your opening your mouth after coming down a steep hill. I will not recommend this procedure to anyone. Who, but a fool, would stick his face that close to two completely dangerous weapons wielded by hate-crazed animals?

Use a whip if nothing better is immediately available.

If you are alone, use your voice to call for help as it usually takes two to break up a serious fight. If you already have help, you can use your voice to command the dogs to obey you. If they have a real respect for you it may help—if you can manage to sound commanding and not frantic.

"—THE BEST WAY TO BREAK UP A DOG FIGHT IS NOT LET IT GET STARTED."



Never kick fighting dogs. About the best you could expect from such action would be a bad bite. Here, then, are the rules:

1. Don't get bitten. Never reach into the fight with hand, arm or leg—and certainly don't get your face within reach of either dog.

2. Take quick and drastic action. Use the best implements at hand. And it is wise to keep suitable implements at hand wherever more than one dog is kenneled.

3. Get help. It usually takes two people to get the dogs apart—and keep them apart.

4. Keep first aid materials at hand for the treatment of both man and animal. A bite is almost a certain guarantee of infection if not treated promptly. All dog bites—or bites of any animal—must be suspect of rabies. (Hunters should always be mindful of the danger of an animal bite. In a neighboring state the only fatal case of rabies in recent years resulted from an unreported bite by a rabid raccoon.) Every bite, rabies or no rabies, is dangerous!

5. Make a real effort to avoid these situations that could lead to a dog fight. The usual result is that two good dogs get torn up with nothing proved.

Crows In A Corner

By Bill Walsh



YOU might think it difficult to corner crows—and in most cases it is. But we've got 'em cornered in northwestern Pennsylvania's "chimney corner" and the shooting is more than fun—it's phenomenal. Maybe we'd better explain.

It's not the hunters who have boxed the crows in. It's Mother Nature and the hunters merely take advantage of her offering. Here's how it works.

Early each spring, the crows that have wintered in southern Pennsylvania and Ohio begin to wend their way back to the northern Pennsylvania and lakefront New York state nesting grounds. Many take a definite flyway that pretty much parallels the Pennsylvania-Ohio state lines, flying loosely in small groups, stopping to rest and chit-chat along the way, and in general being quite lazy about the whole thing. But it's a pretty steady parade at that and a fellow who knows the route can have a lot of fun anywhere along it—interrupting the crows' travel schedule.

But the traditionally crafty crow really outsmarts himself when he reaches the shores of Lake Erie and "makes a right turn" to travel eastward along the shoreline. Here's where Mother Nature has him "boxed in" and it's here that the hunter waits in his blind (on those warm spring days when the wind is wafting along about 5 to 10 miles an hour) with several boxes of shells beside him and a bottle of liniment to rub on his shoulder when the fracas is through.

Any patch of woods between Rt. 5 and the lake makes a good stand on those days—the farther west the better, of course because the crows get a good education from the college of hard knocks and near misses as they progress eastward. Decoys aren't necessary although they add to the flavor and spice of the game and probably bring in a few more crows on certain days—when they're flyin' a bit too high.

Most popular decoys used are the carcasses of dead crows killed early in the day. These are propped in feeding position in an open field or clearing in front of the blind. In wooded areas, they are tied together and tossed over a high branch.

Nor does the traditional "fight" call that usually brings crows in during woodland shooting session later in the year need to be used. A low, squawling type of call works best to bring the migrants within gunshot. Busy and preoccupied with the migration, the crows at this time of the year seem like different birds (April and May). Not that they're devoid of caution—a crow never lets his guard all the way down if he can help it. It's just that the extra bit of watchfulness usually associated with the black sharpies seems to be gone while the birds are coming "home."

One hunter who has participated in the spring crow shoots along the bank of the lake for more than 25 years once had a migrant crow alight on his hat—a black derby. He'd faced the direction of the crows' flight in order to get "goin' away" shots for the practice—and didn't know the bird was coming in until it lighted on his hat and let out a lusty caw. Never could get him to tell us whether he ever shot that crow or not.

Over the years, sport stores and sportsmen's groups in the Erie area have sponsored contests to determine crow shooting "champs" during the spring shooting. Hunters must bring in the feet as evidence. Since the crow is in no danger of extinction as part of the natural scheme of things and since they are plenty suspect when it comes to waterfowl and game bird nest destruction, this gives the hunter double satisfaction by entering the contests.

During the 1957 shoot, the Moniuszko Club of Erie held such a contest and Svend Petersen and John Oshinsky, shown in the accompanying picture, decided they'd be the

winners. They polished up on their crow calling, and fashioned two telescoping poles on the tops of which they placed papier-mache crow decoys. These they placed near their blinds and started shooting. Even though they couldn't get out every day, the pair amassed a total of 217 crows in short order to win the first and second prizes—each prize consisting of five boxes of shells. Only trouble with an award like that is they'll be back next year shooting them up at more crows. In the picture, 217 pairs of crows' feet are proof of the hunters' scores. Petersen got 136, Oshinsky, 81.

Best hunting load for crows is No.

8's—but skeet and trap loads are even better—and cheaper, too. Minus his feathers, a crow isn't as big as he looks while hanging up there in the sky—and the wider the pattern and the smaller the shot, the greater are the shooter's chances of bringing him down.

So, with live targets like migrating crows in the air, small wonder that springtime in Erie finds many a working feller rising early in the morning, checking the direction of the wind—and, finding it right, heading for a favorite shooting spot for a few hours of fun before going into the office or shop. Wouldn't you?

Ike Waltons Announce '58 Drive To Build 'Better' Outdoor America

The promise of a better outdoor America for the nation's growing horde of outdoor enthusiasts is voiced in the 1958 program of The Izaak Walton League of America, Inc., the volunteer organization dedicated for 36 years to wiser management—and more enjoyment—of the country's natural resources.

The 1958 action program, detailed in a special issue of the League's "Outdoor America" magazine, features an all-out drive for final Congressional approval of the League-sponsored Outdoor Recreation Review bill—a measure to create a federal commission to find out just what facilities are now available for fishing, boating, camping, wilderness enjoyment and other outdoor pursuits, and to pin-point ways to assure plenty of room for outdoorsmen in future years. The bill passed the Senate last session, and the League pledges itself to push for early enactment by the House this winter and—at its own expense—to "share the job of helping public and private agencies gather the information we must have to plan wisely for the *better* outdoor America."

League chapters across the country will also take part in nationally-sponsored local projects aimed at improving the outdoors. Calling their September hunter safety and hunting manners program—Red Cap Month—a "smashing success," League leaders promise to hold the event again in '58, and to design and carry out a similar program urging fishermen and boaters to observe the true outdoorsman's code first laid down by the patron saint of sport fishing, the "compleat angler" himself, Izaak Walton.

Other items in the program include: a "grass roots" program of working with local farmers to make the federal Soil Bank plan work for better fishing and hunting; renewed efforts to halt pollution of lakes and streams; stronger protection for wilderness areas; an expanded system of federal refuge and nesting areas for ducks and geese; publication of "Outdoor America" on a monthly basis beginning in 1958; and an information service designed to help the nation's news media in their efforts to better inform the public on outdoor recreation and conservation problems and on what the League is doing to solve them.



FIELD NOTES



Welcome Strangers

TIOGA COUNTY—During the month of December a somewhat rare visitor of the bird family came to Tioga County. It was the evening Grosbeak and some of the flocks numbered upward to fifty. It was quite a treat to see so many of these beautiful birds at the same time.—District Game Protector Keith C. Hinman, Wellsboro.

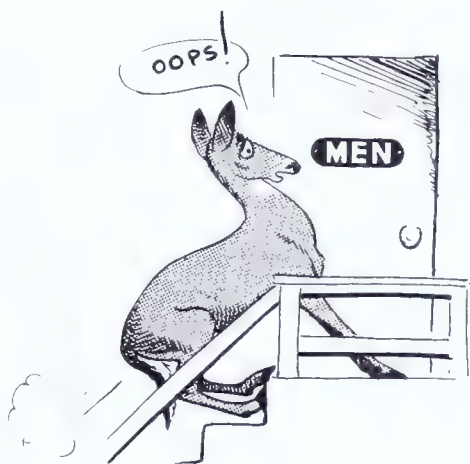
In All Directions

McKEAN COUNTY—On June 5, 1957 I released 70 ducklings in Norwich and Sergeant Townships. Due to the very dry weather we had this year marshes dried up and the ducks left before the hunting season opened. These ducks all wore a Penna. Game Commission band around their legs. Four of these bands have been returned—one from Simcoe, Ontario, Canada; one from Lambertville, New Jersey; one from West Falls, New York and one from McGregor, Michigan. The four men who killed these ducks sure have a vote of thanks coming for returning the bands. I would guess that at least 50% of the ducks released have already fallen before a hunters gun, yet we get bands from only about 6%. If every hunter who killed a banded bird or animal would return the bands, the men who work with wildlife would be able to do a much better job.—District Game Protector John Putnam, Crosby.

Deer for Diner

SNYDER COUNTY—Eight confused doe caused a mild sensation when they ran headon into the front of Mengle's Restaurant located East of Richfield along Route 35. The in-

cident occurred Thursday, December 5, at 9:30 a. m. Mr. and Mrs. Robert Mengel proprietors of the restaurant were eye witnesses to the freak accident. They spotted the doe running in the field across the highway from their restaurant, apparently frightened by hunters in nearby Shade Mountain. The deer suddenly grouped together, raced across Route 35 and ran headon into the front wall of the restaurant. The eight deer toppled on top of each other, several of them stunned by the impact against the concrete wall. Several of the deer were injured as blood stains were found on the wall. The deer scampered to their feet and raced to a wooded area behind the building. One deer, after regaining its footing, ran towards Mengles service station located east of the restaurant. It ran up a flight of stairs on the west side of the building leading to a rest room. After reaching the stair landing, it jumped over the banister and raced off into the marshland behind the building.—District Game Protector Raymond E. Holtzapple, Middleburg.





Ride 'Em Cowboy

SOMERSET COUNTY—Hubert Newman, history teacher at the Salisbury High School recently tried to accomplish a feat common in all of the wild west shows, that of "Bulldogging" a buck deer. Just before Christmas, Mr. Newman was in a thick stand of pine trees on his property digging some and tagging others for sale when three doe broke through the thick stand of pines where he was working. Being startled by their sudden approach he looked up and sure enough a fourth deer, a buck, was following the same route used by the doe. Mr. Newman jumped up from his crouched position and grabbed the deer by the horns and hung on for "deer" life. At this time his plight was becoming desperate and he shouted for several others for assistance who were hunting in the area. His grip failed and the buck escaped leaving him tattered and torn.—District Game Protector Eugene F. Utach, Confluence.

From Tragedy To Comedy

SUSQUEHANNA COUNTY—Many humorous and sometimes sad stories, the product of the past deer season, are just now coming to light. For instance, Deputy Seward Rice shot a doe deer with antlers. Another hunter found a dead doe almost suspended from the crotch of an apple tree. The deer must have been standing on her hind legs reaching for apples when her head became fast in a crotch. Only the hooves on the back legs were touching the ground. This next incident was witnessed by a Pennsylvania resident hunting in New York. The day was very cold and one hunter, who had been on stand for some time, could take it no longer. He had to sit down, remove boots and socks and massage his feet in order to restore circulation. Naturally at this crucial time, several deer appeared. In order to intercept them, our hunter had to run about 100 feet through the snow barefooted. Even then his efforts were in vain for he missed. Then there is the one about the short-tempered hunter who had a beautiful shot except his gun failed to go off. This exasperated him to the point where he grasped his rifle by the barrel and pounded it upon the ground until the stock splintered.—District Game Protector Donald G. Day, Susquehanna.



Mountain Spikes

COLUMBIA COUNTY—We noticed during the antlered season this year, that antlers are again smaller and smaller in the mountain sections of this district. The deer were in good flesh but in about 35% of the cases the antlers were spikes. Other racks were small. The farming and wood-lot sections produced much better racks.—District Game Protector Mark Hagenbuch, Bloomsburg.

To Each His Own

WAYNE COUNTY—Predators are as insecure as their victims and show little mercy to members of their own class. This is attested by Deputy Game Protector George Snyder. At dusk this past December, he saw a Great Horned Owl alight in a tree with his victim securely held by his powerful talons. Deputy Snyder unlimbered his shotgun and sent a charge of number fours on the way but the distance was too great. The old hooter dropped his prey as he flew away. It turned out to be the front half of a larger-than-average housecat.—District Game Protector Frederick G. Weigelt, Honesdale.

The Good and the Bad

CENTRE COUNTY—During the recent bear season I had two cub bears killed by two separate hunting parties. In both cases the individuals involved brought the cubs to my headquarters and paid the quarter penalty as provided by the Game Law. I have a very high regard for this type of sportsman. Contrast this to the other type of hunter. On December 3, 1957 three camps in the same area of the Black Moshannon area had five deer stolen from the meat poles of their camp sometime after midnight.—District Game Protector Robert H. Sphar, Philipsburg.



Like Father, Like Son

CHESTER COUNTY—There were more spike bucks killed in one locality of Barrens Area W. Nottingham Township this past deer season than were killed in this entire district in the past sixteen years. All other deer killed in other areas had nice racks and were in good flesh. (There may be some logic to the fact that spike bucks will breed spike bucks.) Otherwise I cannot give any satisfactory reason why we had this sudden increase in spike bucks on one area when all other deer killed had nice racks.—District Game Protector Peter J. Filkosky, Parkesburg.

Farm Fed, No Fooling

MONTGOMERY COUNTY—During the past deer season I checked a quite a few Butcher Shops, Cold Storage Rooms, etc. for information from big game tags on the dead deer. It certainly was interesting to see the difference in size of the deer killed in our mountainous regions and the deer killed in our agricultural regions. I got to the point where I would look the deer over before checking the tags and in nine times out of ten I was right in guessing whether the deer was killed in the mountains or locally. The local or agricultural deer certainly were the much larger, heavier and better conditioned deer.—District Game Protector William Shaver, Mainland.

Big Bucks

POTTER COUNTY—During the 1957 deer season, I had reports of at least six bucks killed, that actually were put on scales and weighed, hog dressed—from 150 lbs. to 193 lbs. In the four seasons that I have been in this district, I have never heard of any bucks that weighed over 130 lbs.—District Game Protector Rozell A. Stidd, Coudersport.

Swing and Sway

CHESTER COUNTY—The following story was related to me the other day by Deputy Walter S. Styer. On December 3, 1957 Harry Styer of Glen Moore, Chester County, Pennsylvania, decided to go deer hunting in the district, but having no hunting companion to go along, Harry took his portable radio along with him. While sitting on a log listening to some sweet soft music, a nice buck deer apparently attracted by the sweet strains, walked up to Harry and stood looking at him. Six shots were fired at the deer Elvis Presley fan as he danced and pranced away.

P. S. Harry finally got his deer on the last day of the season about 3:30 p. m., this time minus the radio.—District Game Protector Peter J. Filkosky, Parkesburg, Pa.



Bear for Christmas

ELK COUNTY—On the last day of the 1957 bear season, I received a call from a hunter from Aliquippa, who told me that he thought he had mortally wounded a bear in the Rock Hill Section of Elk County. Darkness had prevented him from finding the bear. The next day I sent two deputies with the man to try to locate the bear. Because of a snowfall the night before, all traces of the bear were gone and the search did not produce any results. The unhappy hunter returned to his home. Several weeks later a deer hunter came across the bear about 50 yards from where the searching party had been looking and reported it to us. The bear was in good shape because of the position in which it was lying on the hill and because of the periods of extreme cold weather during the intervening time. We thought it would be nice if we could unite the bear with its successful owner for Xmas, so it was brought to the residence of Deputy B. M. Cain to be retained until we could find the man who had shot it. Here we hit a stumbling block. Nobody could remember the man's name nor could we find any record of it. All we knew was that the man was from somewhere around Pittsburgh and that he had either stayed in St. Marys or in Bennetts Valley the night before the search was made for the bear. Also that he was between 50 and 60 years of age and had light hair. All of the boarding houses for hunters were checked in Bennetts Valley and no results were obtained. A check of the hotels in St. Marys finally revealed a man answering to this description had stayed at one of the hotels and they remembered his story about wounding a bear. They could not remember his name, so a check of the guest cards was made and it was found that quite a few hunters had stayed there the last night of bear season. Finally we found a card where one man had occupied a room

and it was thought to be the man we were trying to locate. A telephone call was made to his home town but it was found that he had no telephone listed. I called the local police and asked them if they would stop at the man's home and have him call me. About an hour later he called and I found that we had finally reached the man in question. Early the next morning, the morning before Christmas, he presented himself to one of the men who was on the search party with him and the bear was turned over to him. A very happy hunt after all.—District Game Protector Fred H. Servey, St. Marys.



Painted Lady

FAYETTE COUNTY—On December 16, 1957, I had an albino doe killed on SGL 51, vicinity of Dunbar by Stuart W. Hall of R. D. No. 2, Connellsville. It is reported this albino deer was the only one ever seen in Fayette County in three years. The oddity of this deer is "that it appeared all white with the exception of a brown patch on each side of its cheeks, having this resembling a young lady with too much facial make-up."—District Game Protector Alex J. Ziros, Connellsville.

Beauty In the Snow

COLUMBIA COUNTY—During the past deer season, I had the pleasure of seeing a large flock of Evening Grosbeaks feeding among the flowering dogwood trees on State Game Lands No. 58 in Columbia County. During my years of service with the Game Commission, I do not recall an incident dealing with birdlife that afforded me more pleasure than I received when these birds allowed me to get within fifteen feet of them and be able to get a good look at their beautiful yellow, black and white markings.—District Game Protector Lewis H. Estep, Berwick.

Some Deer Can Take It

MONROE COUNTY—This past deer season, Deputy D. M. Bush reported hunting with a party in Price Township, Monroe County, and one of the members killed a large buck deer. When Bush started to dress the deer, he noticed that it had been shot through the stomach at least a year before. A prominent Eastern Pennsylvania surgeon, who was in the party, examined the deer and found the bullet had passed through the mid-section of the deer. The wall of the paunch had healed and the slug was firmly fastened to the hide of the deer. I have seen many wounded deer recover from their wounds in the past but this is the first time I have had a report of a deer being gut-shot and living to be hunted the next deer season.—District Game Protector John Doebling, East Stroudsburg.

Deer Success

UNION COUNTY—One group of hunters in this District killed 19 bucks and 7 doe during the two seasons. This party usually numbered from 30 to 40 men. Practically all the animals killed were taken in farming areas or areas adjacent thereto.—District Game Protector John S. Shuler, Lewisburg.

Masquerade

SCHUYLKILL COUNTY—During the opening day of the buck season the Coon Club of Summit Station killed a total of seven buck deer and these had among them a spike with horns in velvet. This they considered rather unusual but when they took the deer to be butchered they found that the spike with the velvet horns was a doe deer.—District Game Protector Ralph L. Shank, Pine Grove, Penna.

Chief Assistant

DELAWARE COUNTY—On December 13th I returned to my headquarters at about 5:00 p. m. and was informed by my wife that a hunter had killed two illegal antlerless deer at about 4:30 p. m. in Birmingham Township. She had received a phone call from another hunter shortly after 4:30 p. m., who told her the license number of the car the violator was in and stating that he would willingly appear as a witness.

Before I returned at 5:30 p. m. she had prepared my dinner, contacted the State Police to get the name and address of the person to whom the car license was registered and contacted a Deputy Game Protector and started him on the investigation. All I had to do was eat dinner and go out and collect the fine.—District Game Protector Daniel S. McPeck, Glen Mills.

Come Out, Come Out Wherever You Are

BERKS COUNTY—With the close of the antlerless deer season at 5:00 p. m. December 18, I returned to headquarters at 6:30 p. m. At 9:00 p. m. I received a call from Luke Dietrich, R. D., Kempton, a farmer of Albany Township, requesting permission to kill deer for damage, as he had twenty-nine in his wheat field at that time.—District Game Protector Harry H. Rickert, Kutztown.

Get Along, Little Dogie

CLEARFIELD COUNTY—On Monday, December 2, 1957 while hunting on the headwaters of Gifford Run, State Game Lands No. 34, Clearfield County, M. H. Yost of Pittsburgh, shot and killed a female coyote, that weighed under 30 pounds. Two or three more of these animals have been reported in the area. The terrain there is fairly open, with plenty of rocky ledges and grass lands, interspersed with heavy stands of timber, ideal country for the coyotes. Although a number of these animals have been killed in the Owls Nest section of Elk County, this is the first authentic kill I have encountered here in Clearfield County during the past eight years.—District Game Protector Theodore C. Carlson, Clearfield.

How Was That Again?

ALLEGHENY COUNTY—A red fox was outfoxed by Pittsburgh traffic on busy Bigelow Boulevard when the fox hitchhiked a ride in an auto with police in hot pursuit. It all began when a pedestrian hailed City Policemen. "Hey," said the bewildered pedestrian, "there's a red fox walking up the Boulevard." Just as the police were telling him to go home and sleep it off, a fox did come loping along. The officers tried to catch the fox with a dog noose. He darted away and true to his sly character darted under a moving car and crouched in the frame. Unaware of his passenger, the driver, who had slowed momentarily, took off and the police followed. Near Herron Avenue, the fox decided to jump ship and this was his undoing. He was bowled over and severely injured by the time police arrived and they were forced to destroy him.—District Game Protector W. J. Brion, Pittsburgh.



Your Friend the Forester

By Don Neal

THE overall production of commercial lumber from the woodlots of individual farmers in Pennsylvania has grown by leaps and bounds over the past decade. Hundreds of farmers, who only ten years ago regarded their wooded farm land as a place only good for the grazing of cattle, have discovered their second-growth timber is a valuable cash crop. A crop that can and must be harvested with the same regularity as other farm crops, and one which is every bit as profitable as the others. These farmers, located in almost every one of the Pennsylvania counties, are strongly organized and their "green

tree" sign, prominently displayed around the borders of their Tree Farms, is already becoming familiar to the average outdoorsman and hunter.

By now we have learned that the "green tree" is a sign of friendliness. That in the greater number of cases the hunter, the photographer, the hiker, even the picnicker and camper are welcomed to the Tree Farm. And all that is asked of him is that he respect the right of the property owner. Especially that he use discretion in building a fire or when using an axe. This, if you will remember back a few years, is a direct "about



WINTER BROWSE for deer is a key to both deer abundance and forest reproduction. When there are too many deer for the winter's food supply, desirable tree seedlings, the future of the woodland, are liable to be destroyed.

face" on the part of the private landowner who, at that time, was posting his land at an alarming rate. Decidedly, there has been a change in this respect. And we have only one person to thank for this changing attitude—your forester.

To begin with, he doesn't expect to be thanked. Forestry men as far back as the turn of the century were advocating the multiple use of both public and private land and he has been trained to that precept. To his way of thinking a piece of wooded land should do four things—grow lumber, retain rainfall, provide wildlife food and shelter, and offer an opportunity for outdoor recreation. Because of his training, his belief in this "precept," he has and will fight a never-ending battle against the posting of any wooded lands. In this respect, he is the greatest friend a

hunter ever had.

But his friendliness doesn't end with the opening of wooded lands to hunting and outdoor recreation. He is as concerned with the problem of wildlife management as any conservationist or sportsman could be. Maybe not for the same reason. While the conservationist and sportsman approach the problem from a "production" standpoint, he looks at it from a "protection" standpoint. The mismanagement of game and wildlife, to him, can be a costly thing—it can upset the balance of his beloved multiple-use precept. For this reason alone, he is an ardent student of both wildlife management and wildlife problems.

Take for instance the question of "winter browsing" deer herds. At one time this was a touchy question and brought on many heated arguments between the Forester and the Sportsman. The Forester saying we had "too many deer," the Sportsman insisting "there should be more." Even today, we can't say this problem has in any way been settled, but at least modern thinking among the foresters leads to a solution. If we are to maintain our present deer herd, and at the same time maintain a multiple-use of our forests, we must soon come to it. To get abreast of the latest thinking along these lines, I contacted a friend of mine who is a qualified forester.

"The question of the winter-browsing deer is a tough one," my friend said, "but it's not unanswerable. Possibly it is a 'tough' question only because we approached it from the wrong angle. For years everyone, including the foresters, thought of it as a game management problem—it isn't, it's a forestry management problem. That is, to this extent. If we give the deer the browse they need to winter on and the shoots from our cuttings give them the summer feed they need, they won't be so liable to eat our young trees."

"Can you do that, though?" I asked.

"In time we will," my friend told me. "When we have a lot more acreage devoted to the 'selective cutting' program we are encouraging through the Tree Farm movement. Look at it this way: the top from every green tree we cut for lumber, pulpwood, ties, or mine props furnishes a large amount of browse for the deer. These are mostly cut in the winter when the greatest deer-damage would be done. And then, every cutoff stump will send up a number of shoots during the summer and the deer go for these in a big way. When they're eating that stuff they're not so likely to eat a young seedling that would someday be a profitable tree."

"But it will take a lot of cut trees to do that," I said.

"It certainly will. But the trees will be cut if we can establish the 'ultimate' in forest management. One of the big problems right now is that in Pennsylvania there are thousands upon thousands of acres of standing timber—good deer browse—that should have been cut ten to twenty years ago to bring its best profit. It's been going down hill since and may soon not be worth a commercial cutting. Trees, like grain, have a proper harvest time—if you're too soon, or too late, you lose some of the profit you should have made. When we can prove this to enough landowners, there'll be plenty of trees coming down every year to feed a sizeable deer herd."

"It sounds logical," I offered.

"It is logical. Furthermore the slashings, the limbs and the heavy branches, are piled in piles that make excellent cover for small game. When the sportsman comes to realize that 'selective cutting' is the answer to some of his most baffling wildlife problems he is going to be one of the biggest boosters the program has."

"Will that be good?" I ask.

"It certainly will. The forester needs the sportsman's support badly. First, to correct impressions about forestry practice within his own ranks.

You know, and I know, there is a strained quality about the friendship that exists between the forester and the sportsman. It's no wonder. For years we wanted to get rid of 'his' deer, and he wanted to cut our young trees for winter browse. There were other points of difference, but these two caused the greatest rift between us. Now, however, we are both coming to learn that 'together we stand, divided we fall' in our fight to make our land produce the four essentials of the 'multiple-use' program. Then, secondly, we need the help of the sportsman in promoting good forestry."

"How could he help you do that?" I ask.

"Primarily, since the Tree Farm movement should be of most interest to him, he could, through the active participation of his clubs and organizations, help in the development of the movement. We are—every forestry

TIMBER OPERATIONS can result in food and cover for wildlife if the slashings, limbs and branches are left on the scene.



department is—short handed. Sportsmen could scout out those areas that are 'ripe' for selective cutting, they could help by talking with the owners of such land and placing in their hands some of the prepared literature we have on the benefits of 'Tree Farm' operation, and they could sponsor demonstrations or 'show me' trips to well managed forests where selective cutting is being practiced."

My friend leaned across his desk towards me. "There are a hundred other things he could do—work on fire prevention, help with stream and watershed protection, get behind every conservation movement there is—but most sportsmen, if they are worthy of the name 'sportsman,' are doing their bit in these fields. Where we need help right now is in the drive to get every inch of forested land in Pennsylvania lined up in some kind of a 'managed' set-up. The Tree Farm unit is ideal for every one concerned."

A SAWYER IN ACTION can leave the work area literally knee deep in useable browse as he trims sawlogs going to the mill.



"How do you mean the 'for every one concerned' part of it?" I wanted to know.

"For the forester it would be the best possible arrangement, for it would insure a steady flow of prime commercial lumber going to market each year and it would tend to prevent 'total' cuttings such as are often made now when a landowner holds back his timber, then unloads it in one super slashing. It would be better for the sportsman for the browse and cover reasons I have already pointed out. Then too, and the sportsman doesn't want to overlook this, the Tree Farm system is dedicated to the multiple use of the land. This means that two of his basic interests in the land—that of providing food and shelter for wildlife, and keeping the lands open for all types of outdoor recreation—are an integral part of the program."

This is true of most foresters. They talk as foresters for they have an unwavering faith in the benefits that will come from a multiple-use land program. They want to aid the nation's economy by giving it lumber, the nation's health by guarding its water supply, the nation's sportsmen by improving the wildlife habitat, and the nation's citizens by providing wider and more available recreation facilities. To him it is a program that will benefit all people. But notice, if you will, that three of the most important points of the multiple-use program are favorable to the sportsman. More and purer water will benefit the fisherman. An improved wildlife habitat will benefit the hunter. And more open and unposted land for recreation purposes will be to every one's benefit. Down deep in his heart this fellow is a true and dedicated sportsman—he's **YOUR FRIEND THE FORESTER**. Why not give him a hand? Work closely with him in what he's trying to do—by helping him, you'll help yourself. And it's a sporting thing to do.



CONSERVATION NEWS



OUTDOOR EDUCATION PROGRAM TO BE FEATURED AT PENNSYLVANIA SPORTSMEN'S SHOW

The outdoors will be brought indoors during a unique demonstration being featured at the third annual Pennsylvania Recreation and Sportsmen's Show, March 24-29, in the world famous Farm Show buildings at Harrisburg.

Three Pennsylvania school districts are taking part in an outdoor education project, normally held at an outdoor camp or other area. Each participating school district has volunteered, for a two-day period, to provide a sixth grade class of from 30 to 35 boys and girls, along with their teachers, who will follow a full daily schedule at the Sportsmen's Show, similar to that which would be arranged for a typical day in the outdoors.

In addition to a continuous flow of activities and events throughout every day of the show, two 1-hour periods (one in the afternoon, one in the evening) will be reserved each day for special demonstrations. During these special hours, spectators at the demonstration display, will be able to view such activities as tree planting, proper preparation for a cook-out, use of devices for proper stream control, proper handling of camp tools, etc.

The school districts and their participation days are:

Brockway-Snyder-Washington Jointure, Brockway, Pa., James L. Hyson, supervising principal, Monday and Tuesday, March 24 and 25.

Bratton-McVeytown-Oliver Jointure, McVeytown, Pa., Richard L.

Kitzmillier, supervising principal, Wednesday and Thursday, March 26 and 27.

Upper Merion Township School District, King of Prussia, Pa., Dr. Harold F. Martin, superintendent, Friday and Saturday, March 28 and 29.

Classroom teachers and others from the school districts taking part will have the help of university students as counsellors. These persons will be responsible for the conduct and welfare of the children as well as health and safety measures to be followed, the same as would be employed during a similar period at camp. A spare-time sight-seeing program of Harrisburg and points of interest in the vicinity is also planned for the participating children and adults.

According to Chairman Othmar B. Wuenschel, department specialist in recreation and outdoors education of the Pennsylvania Department of Public Instruction, "the prime purpose of this outdoor education demonstration, exhibit and program is to provide an opportunity for the general public, as well as personnel from schools of all levels, to develop through observation realistic attitudes and appreciation for a better use of the outdoors in modern living." In addition to the Department of Public Instruction, the following state agencies are cooperating in the conduct of the project: Department of Forests and Waters, Pennsylvania Game Commission, Pennsylvania Fish Commission, and Pennsylvania State University.



PGC Photo by Batcheler

WILDLIFE WEEK PROCLAMATION was signed by Governor George M. Leader in Harrisburg on February 5th. With the Governor was Seth L. Myers, Pa. Federation of Sportsmen's Clubs Chairman for National Wildlife Week and, standing, left to right: Chuck Templeton, Secretary of the Mercer County Council of Sportsmen's Clubs; Maurice Goddard, Secretary of Forests & Waters; M. J. Golden, Executive Director of the Game Commission; and William Voigt, Executive Director of the Fish Commission. In designating March 16-22, 1958 as Wildlife Week for the Commonwealth, the Governor urged Pennsylvania citizens to cooperate in programs of conservation and proper management of our natural resources.

"Greetings!"

"Natural Resources—soil, water, forests, grasslands, minerals and wildlife—are essential to our welfare and security. Proper management of these resources in order to conserve them and use them wisely demands the cooperation and support of the public as well as the work of private and governmental agencies. Public lands are held in trust by local, state and federal governments for all our people to use and enjoy. These lands must be properly managed in order to utilize their resources and capacities to the fullest and to preserve them for our children and for the future needs of our Nation.

"Across the Nation the week of March 16 to March 22, 1958, is being observed as National Wildlife Week to encourage our citizens to cooperate in programs of conservation and proper management of our natural resources.

"Accordingly, the week of March 16 to March 22, 1958 is designated Wildlife Week for the Commonwealth of Pennsylvania and the people of Pennsylvania are urged to participate in this program."

GEORGE M. LEADER
Governor
Commonwealth of Pennsylvania

'57 Snowshoe Hare Harvest Lower Than Last Year

The snowshoe rabbit kill in Pennsylvania during the December 28-January 4 season dropped below that of the previous season, according to a preliminary survey. The final field estimate is not yet available, but certain facts are apparent.

As with other wild animals the population of this woodland creature, properly called varying hare, is comparatively high when natural food and cover are sufficient for their needs, lower as the supply of these necessities diminishes.

In recent years a maturing forest shaded out the low-growing plants so necessary to the well being of the snowshoe rabbit, thus restricting the animal's numbers. But another de-

termining factor, overbrowsing by deer in the "white rabbit's" range in mountainous northern Pennsylvania, contributed much toward the reduction of the snowshoe rabbit population, in view of wildlife authorities.

Since many of the trees have grown to merchantable size increased timber cutting by industry, the agencies administering Commonwealth properties and private landowners raised hopes that the snowshoes, and grouse, too, would benefit in the timbered-off areas. But immediately following lumbering or pulpwood operations hungry deer took over, nipping off new seedlings and sprouts as rapidly as they appeared. The new, low-growing plants and other small vegetation seldom had an opportunity to progress enough to benefit the varying hare and the grouse.

PAYMENT OF BOUNTIES—After a full discussion of the predator situation, and upon motion made, seconded and approved, the following Resolution was adopted:

RESOLUTION

WHEREAS, After giving due consideration to the present predator population;

THEREFORE, BE IT RESOLVED, That the Pennsylvania Game Commission, acting under the power and authority vested in it by the provisions of Article XI, Section 1101 of the Game Law, be resolution adopted this 3rd day of January, 1958, hereby directs that for the fiscal year beginning June 1, 1958, the bounty payments authorized for the birds and animals enumerated below, if killed in a wild state in any County of the Commonwealth during the period specified and presented in the manner and under the conditions stipulated in the Act aforesaid, shall be as follows:

Gray Fox—\$4.00 for each gray fox.

Red Fox—\$4.00 for each red fox.

Great Horned Owl—\$5.00 for each great horned owl, adult or fledgling, killed during all months, except that such bounty on great horned owls be discontinued with the opening date of small game season, whatever it may be, and remain so through November and December.

BE IT FURTHER RESOLVED, That the foregoing Resolution shall be duly published in accordance with Section 1102 of Article XI of the Act aforesaid in the February and March issues of the PENNSYLVANIA GAME NEWS, also to be brought to the attention of the public by news release and other sources of public information; and

BE IT FURTHER RESOLVED, That the Executive Director is hereby authorized and directed to certify the foregoing as an act of the Pennsylvania Game Commission.

M. J. Golden

Executive Director

Pennsylvania Game Commission



GAME PROTECTOR Theodore T. Schafer, of Honesdale, Wayne County, has joined the ranks of retired Game Commission officers. The veteran field officer joined the Commission on July 5, 1933 as an assistant game protector, served later as a traveling game protector for a year, and since 1937 was a district game protector. A native of Port Jervis, the 62-year-old faithful servant of Pennsylvania sportsmen is now enjoying a well deserved rest at his home in Honesdale.

Department of Agriculture Reports New Low in Number of Rabies Cases

During 1957 there were 21 positive diagnoses of rabies in Pennsylvania, compared to 99 in 1956. The Department of Agriculture reported that the number of rabies cases last year was the lowest in the 63-year history of the agency.

Wild species that accounted for 9 of the 21 cases in 1957 were: 3 foxes in Berks County and one each in Chester and Lancaster Counties, also 4 skunks in Snyder County. In only two other counties, Greene and Montgomery, were positive cases reported last year. These were in domestic animals.

Other than wildlife, the animals showing positive rabies in 1957 were: dogs—5; cats—2; cows—3; and horses—2.

Over 4,000 Persons Prosecuted By Game Protectors Last Year

Prosecutions and penalties for Game Law violations in Pennsylvania during the year 1957 exceeded those of 1956, as shown by a tabulation prepared by the Game Commission's Division of Law Enforcement.

During 1957 Game Protectors made 4,417 prosecutions. Cash penalties collected from these offenders and placed in the Game Fund aggregated \$159,006. In 1956 the Commission's field officers made 3,424 prosecutions, as the result of which \$120,604 was deposited for wildlife management in Pennsylvania. The difference, then, was 993 more prosecutions and \$38,402 more in fines in 1957 over 1956.

The bulk of the unlawful acts occurred September through January, for the most part the pre-season and game season months when the large percentage of the violations customarily occur. In the January instance numerous investigations were successfully completed.

The state's wildlife authorities consider last year's law enforcement accomplishments commendable principally because the Game Protectors and their Deputies made the exceptional number of apprehensions by concentrating on major, wilful Game Law infractions.



Wisconsin Reports on Pheasant Stocking Study

In an effort to determine just how much hunting success is improved through the release of ringnecks, the game management divisions of the Wisconsin Conservation Department undertook a long-term study of pheasant stocking in that State. Attention was centered on two approaches, the release of adult birds of breeding age in the spring and liberation of immature cocks in the summer and early fall. The results of the study and a comparison of the two stocking programs are presented in a new booklet, "Evaluation of Stocking of Breeder Hen and Immature Cock Pheasants on Wisconsin Public Hunting Grounds."

Hens released in the spring in time for the breeding season produced smaller brood than the wild hens living on the same areas. It was found also that each two hens released contributed less than two young birds, half of which were cocks, to hunters in the fall. This low production is attributed to the failure of two-thirds of the released adult hens to survive and bring off broods.

Wisconsin figures show that the stocking of young cocks at about 10-12 weeks of age offers the most efficient use of available funds. Releases made close to the opening of the hunting season enable hunters to bag the most birds.

But regardless of how high the returns of stocked birds are, the wild-reared pheasants still produce the bulk of the birds that are bagged each year. "Therefore," the Wisconsinites conclude, "in evaluating stocking as a game management technique the importance of maintaining habitat for the wild breeding population must be considered. Under certain conditions stocking can be an important practice, but under no circumstance can it be a substitute for habitat development and management."



LOST

A coon hound (Plott) along Little Swatara Creek in the vicinity of Fredericksburg, Lebanon County. When last seen, this dog was on a coon trail Saturday night, December 21, 1957. He is bluish-gray in color, has a white blaze on chest with blue ticks. This 3-year-old dog answers to the name of "Blue," is large sized and has large, long ears. His owner has traveled over 500 miles since searching for him, has notified hundreds of area residents by postcard and has advertised in local newspapers. A substantial reward is offered for any information leading to the recovery or location of this dog. Write or telephone:

J. L. Packer
1027 Prospect Drive
Harrisburg, Pa.
Phone: CEdar 6-2283

SLANTS ^{and} ANGLES



An Open Letter To Pennsylvania Wildfowlers . . .

A Pause For Thought Pays Dividends

By Robert S. Dow, D.D.S.

"While glow the Heavens with the last light of day, thy wings have fanned at that far height the cold, thin air. Yet stop not, though weary, waiting safe sanctuary."

For many sportsmen, no sight is more wonderful than waterfowl beating their way across a sunset sky. No beacon lights, radar or radio to guide them, they return year after year to the area of their hatching, there to rear their own brood and finally to fly with them to warmer climes. Through miles of uncharted sky their wings beat on and on, always alert for the many dangers encountered in following the mysterious instinct of migration.

Yet there are many hunters who

see only ducks or geese with the hope that they may be shot. There are no complete records to prove exactly how many ducks and geese are wounded and lost but I believe at least 30% are wounded and lost by the "Sky busters." It has also been estimated that at least 15 shells are expended for each duck bagged. Even the best shooters miss, but they either miss completely or kill clean because they make sure game is in range before shooting. I admit it is great sport to shoot. The more shooting, the more enjoyment but wanton shooting not only results in wounded and lost game but also spoils gunning for others who wait patiently until the birds come within range. Fellow sportsmen—let's wait for them to come a little closer—close enough to kill clean or miss completely.

My trip to Missouri and Arkansas this past season presented cold, windy weather and high water. Ducks were in the timber on the Black River bottoms near Dalton Fields and were not easily accessible. By hard work, some ducks were brought to bag, however. One morning 166 shots were counted and I saw 32 ducks retrieved. These men were good shooters and no ducks were lost. If you shoot grouse, you have some idea of the shooting conditions. Picture a grouse going down wind through tall, thick timber.



Most of the hunters in this region have noticed a change in the flight pattern of waterfowl, with more ducks and geese staying in the northern States as long as food and water were available. Many come south now after the hunting season is well on or over. Our Pennsylvania Game Commission's waterfowl management program is no doubt beginning to pay dividends for Pennsylvania hunters. Through development of waterfowl marshes and ponds plus efficient law enforcement, more ducks are being seen by our local hunters, especially in the northwestern part of the State.

But in the long run, the sportsmen will determine how good our waterfowl hunting will become. Let's hope the "too early" and "too late" shooting will become a thing of the past. You rob only yourself by breaking the law, whether apprehended or not. Trespassing on private property, carelessness when guests of landowners, and other thoughtless acts by hunters are still a major problem. If not corrected, more and more areas will be closed to hunting. Unless drastic changes take place in the attitude of a few, all will suffer. Why not give the matter careful thought? Then carry out a program of conservation with respect to your host, the landowner. You will reap a hundred fold by doing unto others as you would have them do unto you.

Each of us should also make every effort to improve our own hunting



skills. In this way—and this way only—we can cut down the tremendous loss of cripples. First, know your ducks—slow wing beat generally means puddle ducks, fast beat the divers. Next, know how to use a call—the wrong call or one out of pitch will flare any ducks within hearing. It would be better, if you don't know how to call, to keep hidden and quiet. With time to go now until next season, rectify your mistakes and learn to better appreciate your waterfowl. Try and see their beauty in flight, listen to their talk and calls, watch the patterns of their flight. Remember, more can be learned by watching a few live ducks and geese than by observing thousands of dead ones. Try it sometime.

SHOTGUN SPORTS BOOKLET AVAILABLE

"Shotgun Sports, The Why, When, Where, and How of Clay Target Shooting," a 23-page illustrated booklet is available without charge at the Sporting Arms and Ammunition Manufacturers' Institute, 250 East 43rd Street, New York 17, New York.

All interested persons may obtain a copy of this excellent booklet which covers the fundamentals of shotgun shooting, the rules of trap and skeet, and unique shooting games such as the quail walk and the rabbit run, the Wildlife Management Institute reports.



OUTDOOR FUN WITH A FUTURE



Conservation Exhibits

By Ted S. Pettit

WITH Wildlife Week, Arbor Day, and Soil Stewardship Week coming along in the next few weeks, March is an ideal time to prepare some conservation exhibits and displays. Rather simple displays are easy to make and can do an effective job in telling a sound conservation story. Exhibits placed in classrooms, Scout meeting rooms, public libraries, sportsmen's or service club meeting rooms, store windows, movie lobbies, railroad or bus depots or other public places reach a large number of people.

One of the biggest jobs conservationists face today is public education—making more people aware of the need for more conservation, as well as showing what conservation agencies are doing for the good of all people. Good hunting and fishing several years from now depends largely upon what is done now in game and fish management. One way to help get that job done now is alert as many people as possible to conservation needs and practices, so that they know what must be done and how to do it. Simple panel displays, bulletin board exhibits, table top exhibits, and models of different sorts, all can tell a story quickly and effectively.

District personnel of the Game

Commission, Fish Commission, Department of Forests and Waters; personnel of the Soil Conservation District or your County Agent all may have ideas and some of the materials needed for simple exhibits. Talk with them to see if they have ideas and can help you.

A Few General Rules

In building any exhibit there are a few general rules to follow.

First, be sure that the theme of your exhibit—the idea behind it—is important. Be sure that it appeals to people who see it and explains something that the audience understands.

Next, keep the display simple. Tell only one simple story at a time and tell it so that the audience can understand it. Don't get too technical and do not clutter the exhibit with non-essentials. Think of the most effective commercial billboards or other advertisements that you have seen. They are simple and tell one story quickly.

Third, be sure that your exhibit is well labeled so that people know what you are trying to accomplish. Labels should be printed clearly and large enough so that they can be read from several feet away. Labels should be placed so that they can be read without bending over or standing up

on tip-toe. When you are trying to sell something as you are in an exhibit—you are trying to sell an idea—you make it easy for your audience.

Fourth, make signs attractive, interesting, eye-catching, and as short as possible. Use catchy—but not corny—phrases, and try to appeal to people in terms of their own experiences. For example, if forest fire prevention is the purpose of the exhibit, show how fires destroy wildlife homes and are harmful to good trout fishing.

Next, be sure that the display is well lighted and easy to see. The best exhibit possible, if placed in a dark dreary corner, will not attract much attention.

Sixth, try to have someone at the exhibit to answer questions, explain its purposes, and especially, to keep it neat and in order. Sloppy exhibits are not attractive.

Next, be sure that your exhibit is factually correct. Check your captions with an expert first. Be sure that

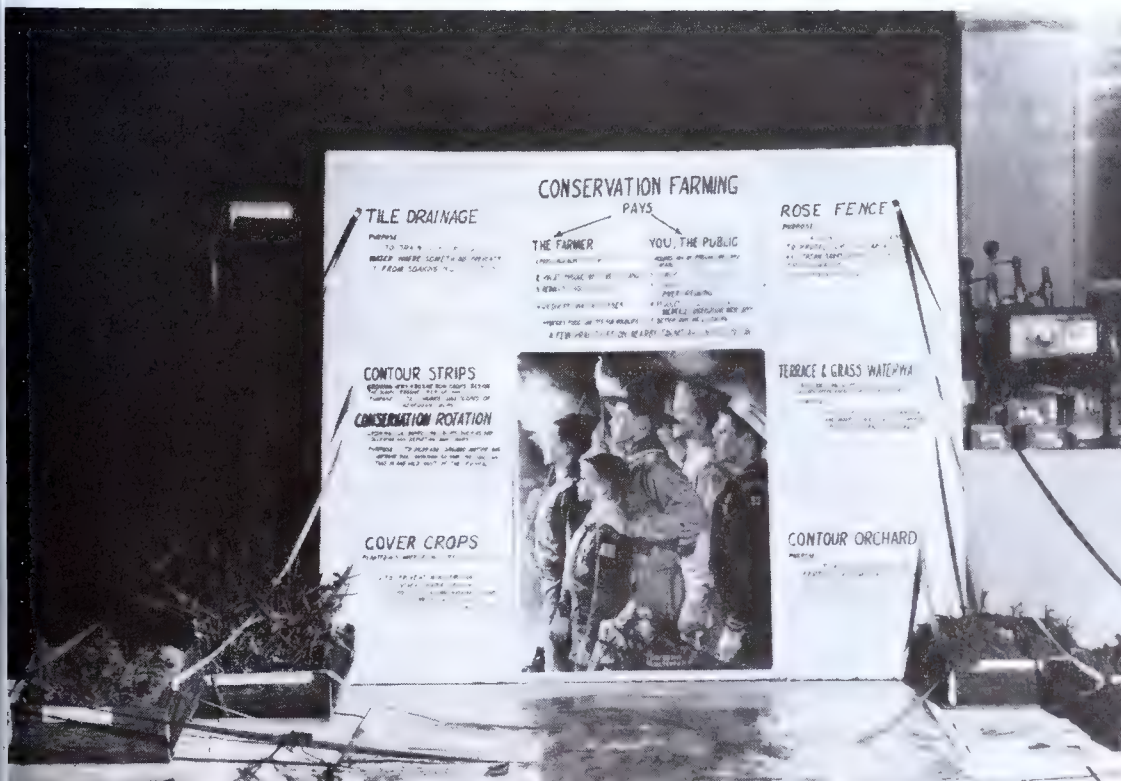
what you display, and say in the display, is right.

Last, try to do two things. Have some sort of action in the display and try to have some audience participation. Some hobby stores sell small, inexpensive electric motors that can be used to provide animation or action. If you can figure out some sort of gimmick so that the audience does something, so much the better. It may be only to push a button to light a light or sound a buzzer, but when a person does something himself, he becomes more interested. (See "Buzzboards" in February Game News.)

Conservation Chart

A large conservation chart is available that may be used to show basic principles of fish and game conservation. A black and white copy, that can be colored with water color or crayon, may be obtained free by writing to the Conservation Service, National Council, Boy Scouts of

EXHIBITS OF CONSERVATION THEMES are always important. They can be made dramatic and colorful. Successful exhibits should be well labeled, tell a simple story, and well lighted.



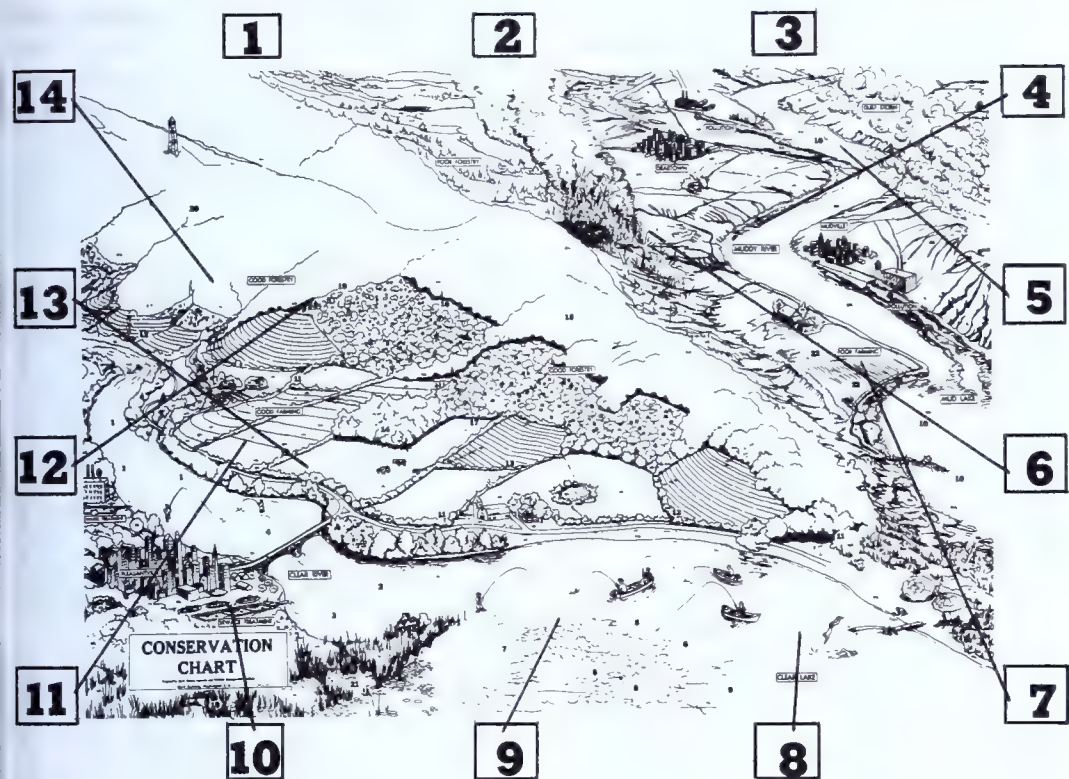
America, New Brunswick, N. J. Charts printed in color may be obtained for 60 cents by writing to the Sport Fishing Institute, Bond Building, Washington, D. C. In either case, by printing the captions given here, and mounting them as shown, you have a bulletin board or panel exhibit that quickly shows how good farming and good hunting help provide good hunting and fishing, boating and swimming.

Caption Numbers	Width-Height of card		Caption Wording
1	8"	6"	Good Farming, Good Forestry, and Waste Treatment Mean Good Fishing and Good Hunting.
2	18"	10"	Which Valley Has the Best Fishing and Hunting?
3	8"	6"	Soil Erosion Forest Fires, Pollution Destroy Good Fishing and Good Hunting.
4	10"	6"	Soil Washing into Rivers Covers Fish Food and Fish Eggs on the Bottom.
5	10"	6"	Carp Are one Kind of Fish That Live in Muddy, Polluted Rivers.
6	10"	6"	Forest Fires Destroy Ground Cover and Often Lead to Soil Erosion Which is Harmful to Fishing as Well as Farming.
7	10"	6"	Poor Farming Causes Soil Erosion Which Results in Poor Farm Crops and Poor Fish and Game Crops, Too.
8	10"	6"	Swimming, Picnics, Boating, Water Skiing, Fishing Are Fun When Water is Clean and Plentiful.

9	10"	6"	Several Kinds of Game Fish Abound in Clean, Clear Lakes.
10	10"	6"	Treatment of Sewage and Industrial Wastes Helps Keep the River Clean and Safeguards Health and Recreation.
11	10"	6"	Good Farming Keeps the Soil on the Land. The Farmer Needs It. The Fish Don't Want It.
12	10"	6"	Well-Managed Watersheds Mean Ample Quantities of Water for Industry, Domestic Use, Farming and Recreation.
13	10"	6"	Small Game Animals Live in Farm Fencerows.
14	10"	6"	Good Forestry Helps Protect Water Supplies and Provides Wood Products as Well as Many Wildlife Homes.

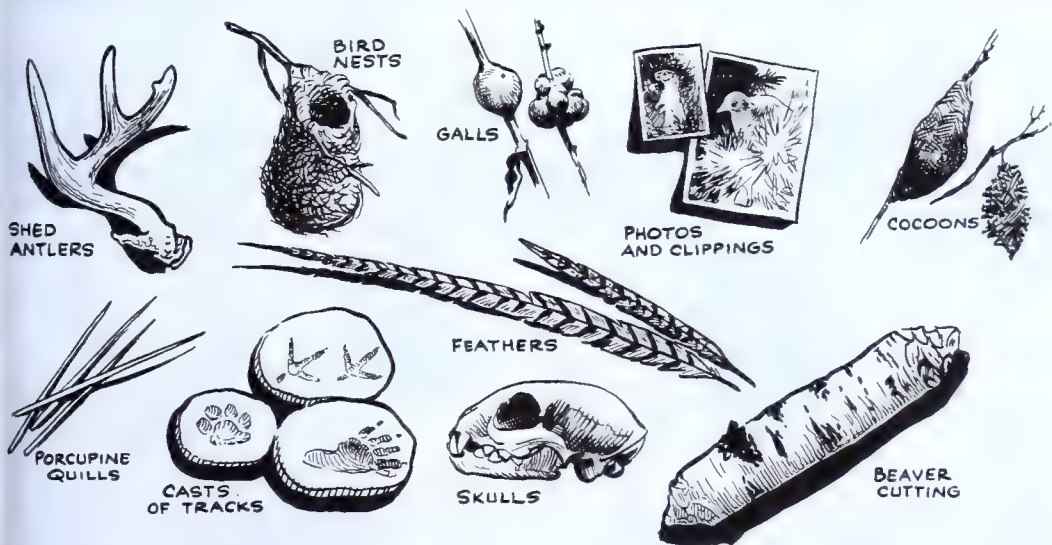
Display of Animal Signs

Attractive exhibits or window displays can be built using animal signs found in almost any community. By careful observation along trails through woodland and meadows, along banks of streams or water holes, rock piles, fencerows, and edges of clearings, many animal signs may be found. These include evidence of gnawing by mice, rabbits, beaver, or porcupine on the trunks and branches of trees or shrubs; homesites constructed by animals, such as leaf nests of squirrels high in the branches of a tree, or the grass nests of field mice located both above and below ground, especially in the heavy grass of open meadows—these are often dug up and torn open by skunks or foxes. Tracks of larger animals may often be observed in soft mud along streams or around water



holes. They are easily reproduced by plaster casts. Other tracks and trails are made by small rodents in the dust or sand along roads and paths or in the snow. The burrows of ground squirrels, woodchucks, or foxes, ridges constructed by moles, all constitute evidence of these animals. Similarly, burrow openings in banks of streams reveal the presence of muskrats, and leaf nests in hollow

logs or trees indicate the presence of raccoon and other woods-dwelling creatures. These can be photographed or removed intact. Some animals, such as squirrels, gather food supplies for use during winter months. Food caches consisting of acorns and other seeds, grass cuttings, and plant tubers are gathered by many rodents including pine mice, domestic rats, and lemmings. Occasionally, the shed



antlers of deer, the pellets from owls, and feathers or tufts of fur reveal the presence of other creatures. Most of these objects can be collected, sketched, or photographed for identification and display.

Build a Model of a Farm

Since most small game—rabbits, pheasants, quail and squirrels—are produced on farm land or on abandoned farms where certain conservation practices have been used, a very effective story may be told through a small model of a farm. The model can show a wood lot, hedgerows, farm pond, food plots, odd corner paintings and other farm game management practices in a simple yet interesting way.

Models may be built of fiber board, such as Celotex or of paper-mache. An easy way is to use pieces of fiber board cut to match the contours of the land. The pieces are placed one on top of the other and glued together. To form hills and valleys, the edges of the fiber board are then

filed or sanded smooth to make even slopes.

Make a base for the model from 1-inch lumber the size and shape of a farm. An 80-acre farm could be 2 feet by 4 feet. The first layer of insulation board should be the same size as the base.

Then cut the succeeding layers according to the contour lines and glue them together. You may be able to save material and reduce the weight of the model by having the layers overlap only a little so that the inside is hollow.

Plastic crack filler or paper-mache may be useful during the final shaping. You may want to make some minor cuts and fills for roads, gullies, and other physical features.

As the first step in decorating the model, paint it with glue. While the glue is still tacky, sprinkle screened sand over it. This surface has a texture that will make it look like fields and pastures when painted suitable colors.



In deciding on the scale for the other items on the model, it is a good idea to start with the buildings. They need not be the same scale as the land; usually they can be somewhat larger. But other items such as fences, machinery, and livestock should be in scale with the buildings.

Buildings—Cut buildings from balsa or other softwood. You can do some carving but windows and doors can be painted on.

Fences—Drive dark nails or pins for fence posts and cut them off at a suitable height. For barbed wire, use fine wire fastened by a loop around each post. For woven wire cut strips of screen and push them into the modeling material; fasten with airplane glue.

Clover, alfalfa, and grass—The best way to simulate these crops is to paint the areas and sprinkle sawdust of appropriate colors over them. Sawdust coming from different kinds of machines, such as sanders, saws, chippers, and jointers, has different textures. The texture can be altered by screening. Coarse-textured sawdust is best for crops like alfalfa and clover; fine sawdust would be best for grass. Color the sawdust with a mixture of about one-fourth paint and three-fourths turpentine. Pour this over the sawdust and then spread it out to dry.

Bare soil—Fine sawdust, or the

modeling material itself will give about the right texture if painted the right color.

Shrubs—Cut sections from colored sponge and glue them in space. You can make isolated trees in the same way, but to represent a woodlot treat the whole area as a mass, using colored sponge.

Models of farms can also be made with papier mache. On a sturdy base make the shape of the farm you want by bending and shaping chicken wire. Then cover it with layers of paper dipped in paste, until you have the right amount for strength and form. Add the buildings, fences, and crops as explained above.

Other Ideas

Other ideas for displays include: bird houses, and feeders, made to the correct specifications for certain birds; samples of wild seeds, nuts, fruits eaten by birds, samples of plants browsed by deer; gun safety and hunter safety posters; panels showing food chains of game birds, fish or mammals or mounted specimens of birds or mammals.

Dramatic panel displays of food chains, showing how game animals depend upon good soil are easy to make, using pictures cut from outdoor magazines or old GAME NEWS covers. The illustrations show how to do it.

ANIMALS DIE ON RURAL ROADS TOO

Pennsylvania highways built to move heavy traffic rapidly are not the only ones on which vehicles kill animals, says Dewey H. Miller, a member of the Game Commission. As proof he produces a report made by Carl Stiffler, a State Road Supervisor in Bedford Township, Bedford County.

Stiffler's original tally for a two month period in 1956—October 25 to December 24, inclusive—shows that dead wildlife removed from 23 miles of rural road in his Bedford County district totaled: 93 rabbits, 6 squirrels, 2 deer, 23 skunks and 22 opossums. Dead domestic animals removed were: 26 cats and 10 dogs.

As Commissioner Miller says, if the quoted tabulation were used as a measure to determine the statewide kill of animals on rural roads alone the totals would be enormous.



Photo by Donald S. Heintzelman

When You Get a New Dog

By Horace Lytle

DON'T wait until too close to a new season. The farther ahead you act the better off you will be. If you wait until the last minute, you may discover "kinks" you just can't get corrected in time. And any such may be no real fault of the dog. It may be but a matter of adjustment between the two of you. Any man and his dog must learn to team together. In the field or woods much can be accomplished before training season closes, from April to August; and even during that period yard-training will be in order.

So now seems a good time to give you some DOs and some DON'Ts. If you are looking for a pointing dog for upland feathered game, don't just blindly follow whatever may be the latest fad as to breed. You may find one that suits you perfectly—or you may not. After all, whatever his breed may be, you should seek the individual dog that best "fits" you. Among our long-established pointing breeds there are both slow dogs, and fast—stylish, or lacking it—bird-wise, or less so—timid, or bold—biddable, or unruly. But, whatever any man says to the contrary, here's where you should start looking! Only then, if your search fails to uncover a "fit," is it time to try elsewhere.

Among the pointing breeds the Brittany has forged forward to in-



creasing importance. Here you have the only pointing Spaniel, and he does so most readily. Because of this, coupled with the fact that his natural range is comfortable for hunting afoot, he has won wide popularity. Here, then, you have a breed to consider—and there are various others, as is well enough known not to need detailing here. Among any of them, if you find the individual that you just know surely suits you, get him!

Springer and Cocker Spaniels are both used for upland feathered game. However, neither breed points. Each flushes or “springs” its game within gun range. Having done which, the dog must immediately “hup” and remain steady for the shot—and until ordered on to retrieve. This writer well remembers the early Springer promotions on this side of the Atlantic. Freeman Lloyd was chief

booster for the breed, the main basis of the wide publicity he gave them being the fact of adaptability for a mixed-bag. One seldom hears this mentioned any more. They don't seem to need it. Anyone not a stickler for having game pointed is apt to go for a Spaniel. And here's one angle: A running ringneck has no point to leave—the dog goes to him. If the “spring” isn't then beyond gun range, the hunter can score. Cocker Spaniels today are but a smaller breed than the Springer, and also used mainly for pheasants. Originally, however, and from which fact came their name, they were popular as Woodcock dogs.

Retrievers, of various breeds, have come into their own of late years, and most deservedly so. Always a necessary adjunct for proper pursuit of Wildfowl, they are now often found also bringing crippled pheas-

OBEDIENCE TRAINING should be started early in a young dog's life. It can be done in the house or in the backyard. This Irish setter pup is learning that “whoa” means stop and “sit” means sit.

Photo by Pete Czura



ants to bag. Than which there can be no more important canine function. Any game damaged and lost is but a horrible waste—to be avoided at any cost, if it can be.

Fortunately, so it seems to the writer, the various Hounds have not been subject to breed fads, as has been the case of some of their cousins—especially those of the pointing variety. Should one chance to desire a slower dog than a Beagle, he has but to turn to a Basset. No one ever hears of wanting a slow Foxhound! Anyhow, for whatever type of game you mainly hunt, we hope your next canine may meet your tastes—and that you may meet his.

In case your new dog is a young one, any man worthy of owning him will take all the precautions to avoid gunshyness. Experience has taught us the same care is not always exercised when a dog is reported as fully trained, and to have been hunted for one or more seasons. It seems almost a fetish for new owners to imagine the first thing they must do is prove to themselves the dog is not gunshy. And that's all wrong!

The first essential is to give the dog time to become fond of you, and for

you to win his full confidence. Time enough then to begin to think of shooting over him—but only under proper conditions. Don't tie a dog to a tree and shoot over him—too close—and at nothing. This just doesn't make sense. I never subject any dog to anything that doesn't make sense. That will but cause a loss of confidence in you. If the dog hasn't even been given a chance to gain confidence, it's all the worse. Thus a tied dog, shot-over-at-nothing, can be made gunshy—even if he is no more gunshy than you are when he is subjected to this silly "test."

Have a manifest reason for shooting—or don't shoot. Let the dog be afield and find game, feather or fur, according to what type is his forte. Then is your time to shoot, and if he's not gunshy he won't be. This is all perfectly reasonable, and he knows it. Understanding it all, he knows he has nothing to fear. The whole idea makes sense to him. Without which understanding, he well may wonder what's going on—and you can't blame him.

Now you will be reading this when no game is in season. So it seems proper to mention that any firearm used in such shooting test should be pistol or revolver with blank ammunition. That's no handicap. The dog has found game. The natural sequence is a shot. This he expects, and thinks nothing of it.

And this is the way—the only way—that any man in his right mind should dare testing his new dog to gunfire. Anything else is but flirting with trouble, and may prove poor flirting indeed. As this is written I have a dog coming 13 years of age. Yet even now I would not shoot over him, with no manifest reason for him to understand—not for anything at all.

At his age, and with his faith in me, I think he would stand up to it. But it wouldn't make sense. So it's the type of risk I wouldn't take. Don't you!

Photo by L. G. Kesteloo





Archery's Ups and Downs

By Tom Forbes

SINCE the first "Sputnik" sailed into space and began its orbit around the globe, the science of Physics has assumed top priority in the United States. Probably the first reaction of the reader of this column is, "What have space satellites to do with archery?" First, the satellite and the arrow are missiles. Second, their flight depends on the initial application of an external force. This force is applied to the satellite by a rocket and to the arrow by a bow. Third, both objects are effected by the Law of Universal Gravitation which we call the gravitational pull, or simply gravity.

At this point in our discussion let us leave the space satellite and confine ourselves with the flight of an arrow and resultant effect of forces which act upon the arrow after it leaves the bow. Two forces act on an arrow in free flight; the friction of the earth's atmosphere, and gravity, the force which attracts the arrow toward the center of the earth. Friction caused by passage of the arrow through the air decreases the velocity of the arrow in the same manner constant pressure on the brake pedal brings an automobile to a stop. At the same time the pull of gravity is drawing the arrow toward the center of the earth. In the first instance the initial velocity imparted to the arrow by the bow slowly decreases. At the same time the velocity with which the arrow falls toward the earth is accelerated for each succeeding interval of time it remains in flight. The effect



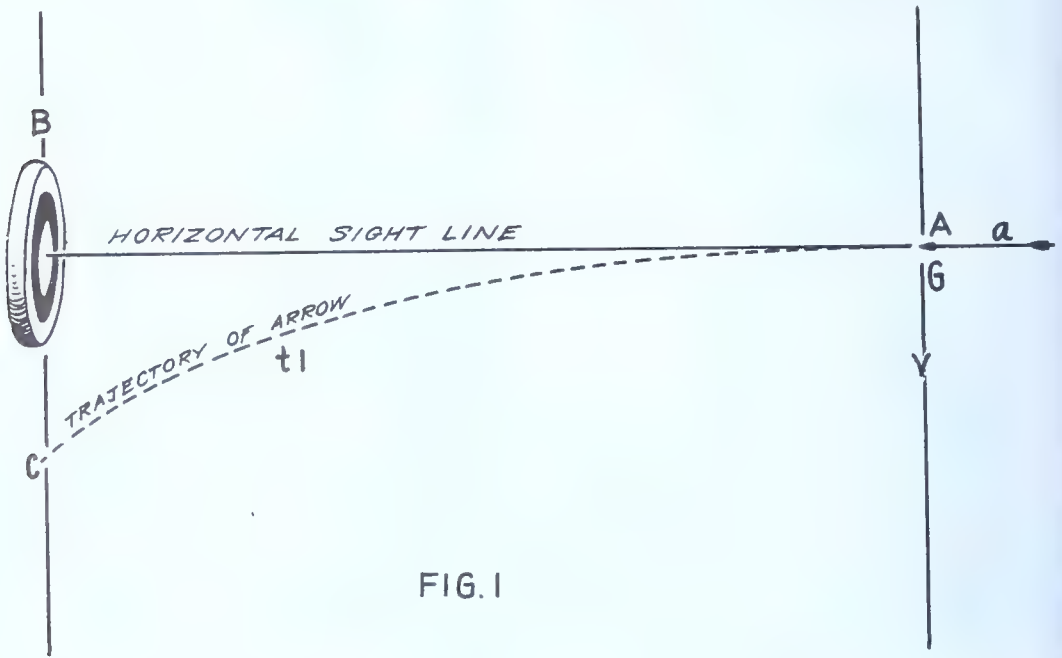


FIG. 1

of the two forces is easily demonstrated by shooting an arrow from a high point. If the arrow is shot from the horizontal it appears to fall away from the horizontal very little in the initial stage of its flight. As its initial velocity decreases it turns in an increasing arc toward the earth until, the initial velocity having reached 0, the arrow falls directly toward the earth due to the pull of gravity. Fig. 1 presents graphically the trajectory of an arrow shot horizontally from a

bow at point A. G_1 indicates the direction of the gravitational force and (a) the impulse or initial velocity imparted to the arrow by the bow. The effect of these two forces is the resultant trajectory of the arrow. Since gravity acts throughout the time of flight (t_1) of the arrow, any increase in force (a) will decrease the time of flight and the vertical distance (BC) will decrease. To take advantage of the increase in velocity of the arrow the bowman selects the

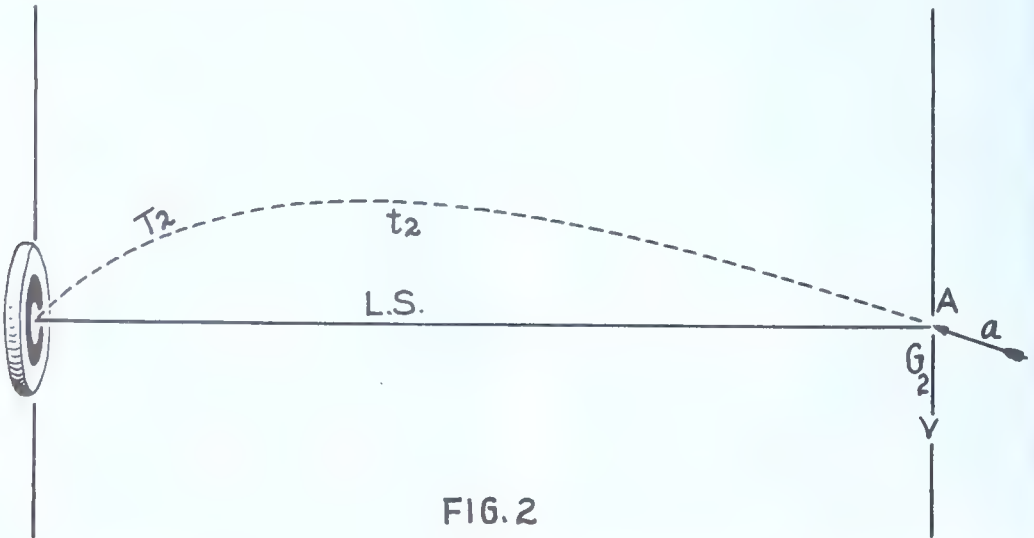


FIG. 2

bow with the heaviest drawing weight he can handle comfortably. Every archer knows that he must incline his arrow above the line of sight in order that it will fall into the target, Fig. 2.

Fig. 2 represents conditions we encounter shooting over horizontal terrain. The arrow will rise since it is inclined toward the vertical but this rise will be impeded by both friction and gravity (G_2). The result will be a lesser velocity and the time (t_2) required to reach the target will be greater than (t_1) in Fig. 1. Since gravity acts throughout the time it will have a greater effect on the trajectory of the arrow which will assume the shape of the arc (T_2).

By trial and error the instinctive shooter acquires the ability to register hits on a target which is located at the same elevation as the shooting position. However will the same technique register hits on targets which are equi-distant but up-hill or down-hill from the shooter? Unfortunately it won't, as each of us has found out. A maxim known to every rifleman is: Hold high on up-hill shots and low on down-hill shots if you want meat

in the locker. The same maxim applies in archery. Let us examine the reasons this maxim holds true in every instance.

First let us confine ourselves to shooting up-hill, Fig. 3. What change in the elevation of the bow hand will we have to make in relation to the position we held it when shooting on the level? Since the target is above the shooting position we logically reason that the arrow must be inclined more from the horizontal than it was in Fig. 2. What effect will this increase toward the vertical have on the velocity of the arrow and the time it will take to reach the target? The pull of gravity (G_3) in Fig. 3 works in opposition to that part of the initial force which thrusts the arrow upward. This causes a corresponding decrease in the horizontal component of the thrust (a) and the arrow flies toward the target at a slower speed than it did when shot from the position shown in Fig. 2. The resultant effect of this lower velocity or speed of the arrow is to increase the time (t_3) necessary to reach the target. Since gravity pulls the arrow toward the earth during the total time of its

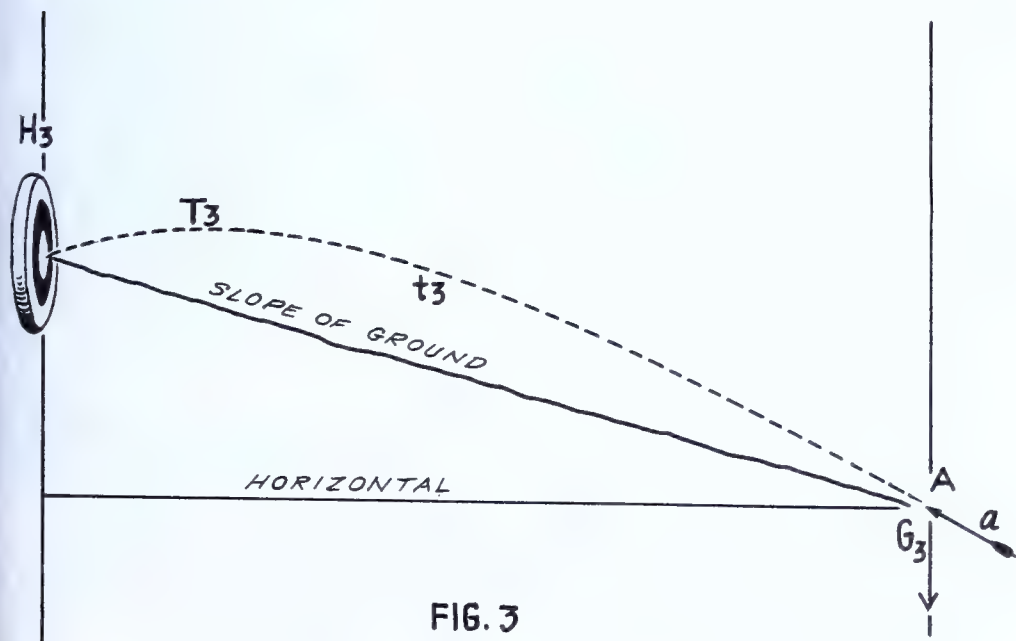


FIG. 3

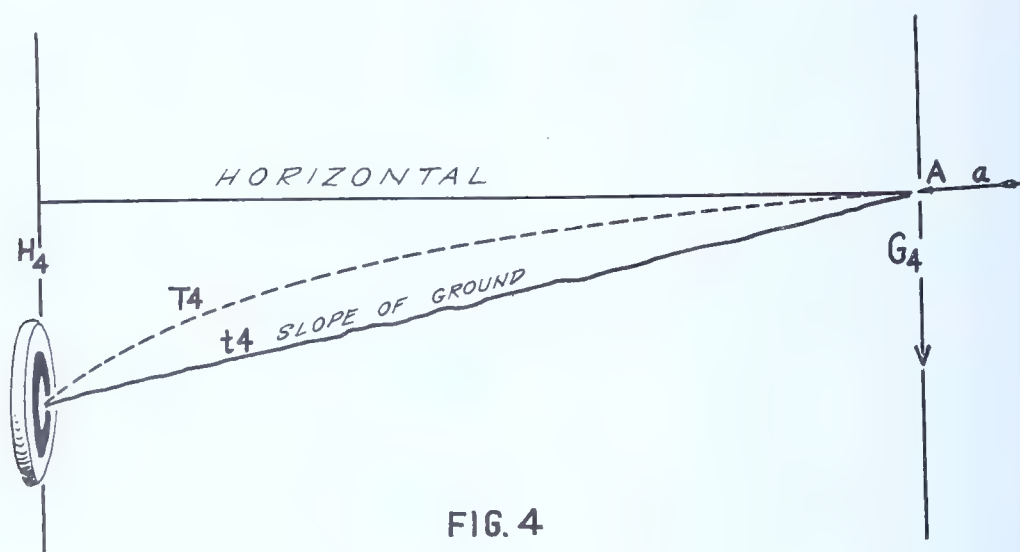


FIG. 4

flight, we must compensate for the additional gravitational drop due to the time differential between (t_3) and (t_2). We do this by elevating the bow hand. By holding high on up-hill shots we assure ourselves that the arrow will drop into the target.

The effect of the external forces acting on an arrow that is shot down-hill, Fig. 4 produce a different result. In shooting down steep slopes the arrow will be inclined below the horizontal at the instant of release. The initial thrust or impulse (a) will have two components, one acting in a horizontal direction and the other downward. The pull of gravity will have an additional force acting in the same downward direction. This combination of forces will result in increasing the velocity of the arrow as it flies down-hill toward the target in comparison to the velocity maintained under the conditions encountered in Figs. 1, 2, and 3. There will be a corresponding decrease in the time of flight (t_4) taken to reach the down-hill target. The gravitational drop is directly proportional to the time the arrow remains in free flight and it will therefore be less than in the other cases. We compensate by lowering the

bow hand from the position at which we hold it when shooting over horizontal terrain. Thus by holding low on down-hill shots we are able to register hits on the target.

Again stated in simple terms the rule is: Hold over on up-hill shots and under on shots down-hill from the shooter. We can't ignore the effect that gravity has on the arrow in flight but we can compensate for it.

Apply these principles the next time you shoot your field course and you will blank fewer up- and down-hill shots. You may be pleasantly surprised when you total your score and you will have a much better chance of getting your buck next season.

The author was not as lucky as his bow hunting friend. A nice four pointer was standing under an apple tree and presented a broadside shot at 45 yards. The orchard lay on a slope and the shot was up-hill. The bead was drawn on the chest cavity and the arrow passed under the belly of the deer just back of the foreleg. The distance paced off 45 yards and then the author realized that when the chips were down he had failed to follow the maxim: Hold high when you shoot up-hill.

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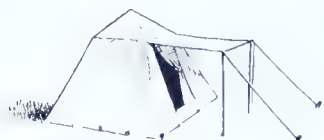
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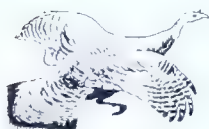


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THE STORY BEHIND THE COVER

COURAGEOUS is the word for the Chesapeake Bay Retriever. Some people go so far as to claim no other dog in the world is as ready, willing and able to stand as much punishment in heavy seas and zero weather. And that's probably why this particular breed has gained so much fame among the waterfowl hunting fraternity.

Nobody knows exactly where the Chesapeake came from. Most authorities agree that he is at least partly descended from the Newfoundland dog of 150 years ago. A popular legend is that an English brig was wrecked off the coast of Maryland in 1807 and among the survivors were two Newfoundland puppies. Another interesting possibility is that these dogs were crossed with yellow and tan Coon Hounds, thereby getting the breed its great nose and stamina, dead-grass color, yellow eyes and long tails.

But on the modern Chesapeake's characteristics, everyone agrees. First and foremost, he loves water. Secondly, he has the perfect canine swimming "suit" for it. His dense under coat, covered by a heavy, wavy coat of guard hairs plus a distinct oily substance make him almost impervious to cold and ice. Thirdly, the Chesapeake has tremendous endurance. They have been known to retrieve as many as 200 ducks in a single day, including swims of a mile or more for some of the cripples. Finally, the dog has a remarkable memory. He never forgets the location of a duck that has been downed, even when it swims or floats out of sight.

Not as popular as the Labrador, the breed is nevertheless in wide use not only around the Chesapeake Bay but on all the major waterfowl flyways of North America. And yet, even his staunchest advocates will admit he is not perfect. Although plenty rugged looking, the Chesapeake is no beauty. Breeders, of course, have purposely kept him that way so that he never became spoiled in dog shows. Because of his oily coat, the Chesapeake is likewise not ideal as a "house pet." And furthermore the Chesapeake is inclined to be a "fighter," an attribute which has led to many a kennel fight and also weeded out the men from the boys among owners and handlers.

Still, if you want a top-notch retriever, like to hunt ducks in fair weather and foul, admire independence and rugged individualism in your companions, no dog in the world will give you more for your money than the Chesapeake. And as Iwan Lotton has so skillfully portrayed him on this month's cover, here is a dog that excels as a working animal. In fact, when it comes to getting ducks, the Chesapeake probably knows more about the business than you do!

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PENNSYLVANIA GAME NEWS

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Iwan Lotton

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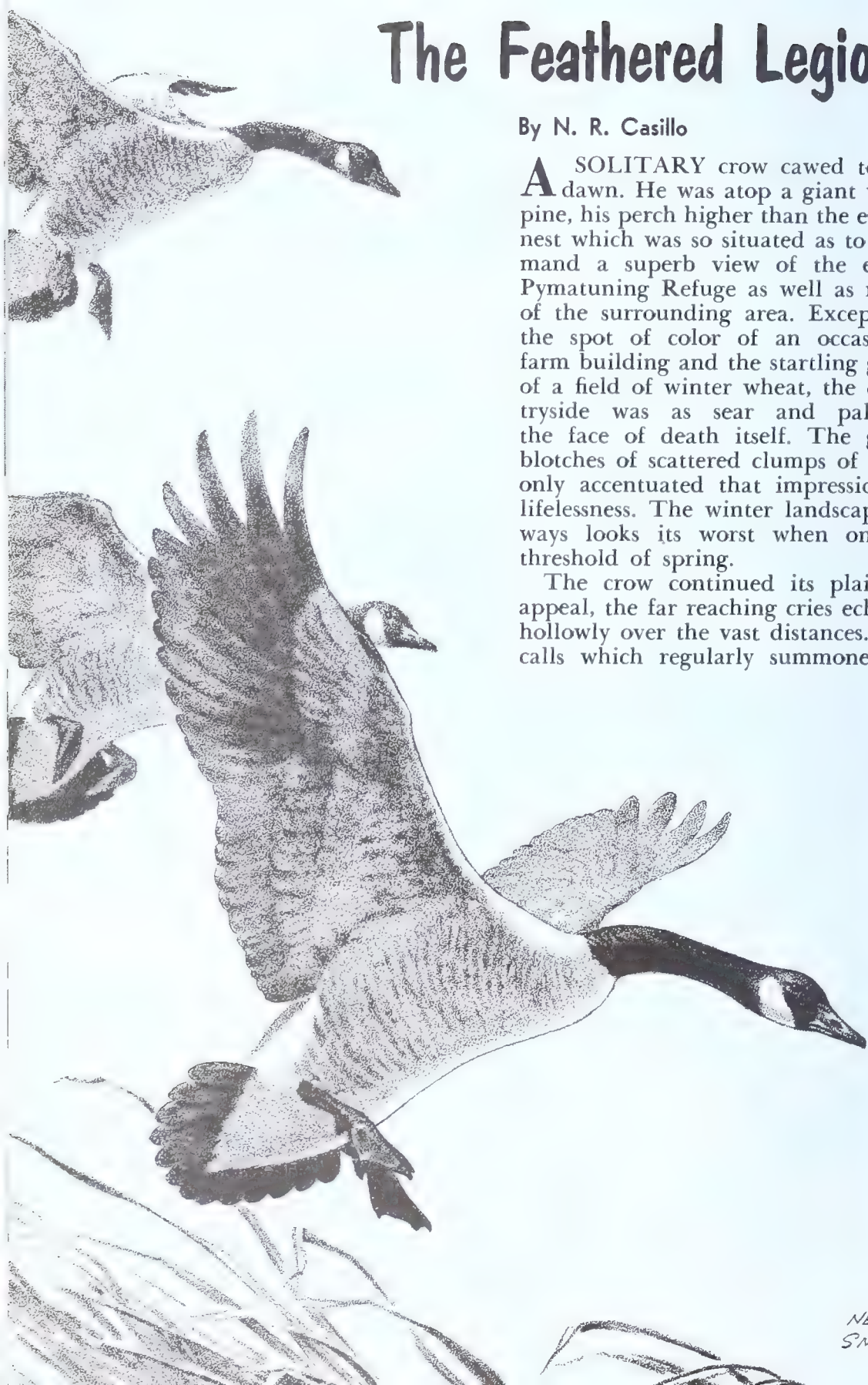
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The Feathered Legions

By N. R. Casillo

A SOLITARY crow cawed to the dawn. He was atop a giant white pine, his perch higher than the eagle's nest which was so situated as to command a superb view of the entire Pymatuning Refuge as well as much of the surrounding area. Except for the spot of color of an occasional farm building and the startling green of a field of winter wheat, the countryside was as sear and pale as the face of death itself. The green blotches of scattered clumps of pines only accentuated that impression of lifelessness. The winter landscape always looks its worst when on the threshold of spring.

The crow continued its plaintive appeal, the far reaching cries echoing hollowly over the vast distances. The calls which regularly summoned its



NED
SMITH

sable kindred fell upon deaf ears. On this particular morning they unwittingly heralded the vanguards of the returning waterfowl. This, despite the fact that the ice of the refuge waters had not yet completely disappeared, the remaining fetters requiring but a nudge from a friendly wind to release the waters which were already impatiently thrusting aside the weakening embrace of a tottering Winter.

As the gray dawn slowly broke, the pallid landscape became domed with a high, leaden overcast against which hung an eagle, slowly soaring. The king of the soundless spaces barely heard the crow's calls and fainter still was a confused clamor wavering hesitantly on the sodden air currents. As the eagle swung toward the distant sound to complete the great arc he was describing he spied a flock of Canada geese and his eyes narrowed in anticipation. On one or two occasions he had dined sumptuously on newly arrived migrants so he was ever alert for possibilities. The wedge consisting of some thirty birds was even then slanting toward the considerable area of open water gnawing at the restraining ice.

As heretofore noted, the calls of the lone crow were not in vain for they unknowingly heralded the coming of such hordes of waterfowl as were never before witnessed in the Pymatuning. The first flock of migrants was given the necessary clearance by the calls of the ever wary crow. To the sagacious old gander leading the flock the calls were tantamount to, "All's clear—come in." After one last try the undaunted crow winged off to seek its errant companions.

The eagle coasted toward the descending geese and when over the desired spot half closed his wings to plummet downward with an amazing speed. Down, down he plunged as swiftly as a plane in a power dive. Then at the precise instant he stretched powerful pinions and the

rushing air streamed through straining quill feathers with a harsh hum. The spectacularly checked speed was punctuated by a short bounce as the white headed predator landed near the new arrivals.

The wintering mallards which had used the open water all winter long paid slight heed as the eagle awkwardly waddled to the water's edge. The newcomers with their inherent wariness slowly floated farther out as they suspiciously eyed the interloper. There were no easy victims. However, the eagle's disappointment was short lived. Almost at once he spotted the carcass of a sizable catfish floating but a few feet away. In an instant he had it.

As the morning wore on there were intermittent snow flurries and out of the swirling flakes appeared more flocks of honkers along with smaller contingents of snow geese. Most of them came down on neighboring fields. One such field on the southwestern edge of the refuge contained more than a hundred geese of both species. Across the road in a field of wheat stubble there were nearly twice as many, the few snows showing up conspicuously among the ranks of grey. The air was almost constantly crisscrossed by intact and broken flights of both species, some apparently headed for the open water of the main lake, others seeking uncrowded feeding areas.



The five or six hundred resident geese were in a dither, their excitement doubtlessly induced by the returning legions. There was a bedlam of cries, the musical cacophony of the geese contrasting sharply with the raucous hubbub of the mallards.

The open water into which the first flock had splashed rapidly filled with a variety of returning and transient voyagers. The eagle, in the meanwhile, had long since repaired to his lookout in a tall elm at the eastern edge of the refuge to better enjoy his toothsome prize. Nearby perched his mate, drowsy after a recent meal on a long deceased coot, the latter a victim of a forgotten muskrat trap. The trap still grimly clutching one foot, dangled from a branch into which it had dropped after the eagle had torn the coot from it.

In most spring migrations the birds move northward unnoticed. They usually arrive unobtrusively and if they are transients they will depart in a like manner. There are few if any concentrations of single species while in flight and when they occur they are for but brief periods. Then, for reasons still unknown they will depart from regular migration time patterns. We could guess at causes such as peculiar combinations or timing of weather conditions, the presence of heavy concentrations of

predators or it could even be pure coincidence. Whatever, the cause, back in 1954 the Pymatuning witnessed an extreme departure from regular migration practices.

The first hint of anything unusual was when an unprecedented number of coots (estimated at upwards of 2000) rafted in the main reservoir just south of the Espyville-Andover causeway. The arrival of this great concourse of birds was unnoticed. It is not really known whether they dribbled in or arrived en masse under the cover of darkness. Although observers reported that they were "rafted," this was not actually the case. When viewed by your narrator the birds were in no sense rafted in the manner of scaups and other rafting ducks. Incidentally, in their winter quarters the coots do gather in large flocks.

Singularly, a few baldpate ducks mingling with the coots were observed hijacking the latter. Whenever the ducks saw a nearby coot surface with a mouthful of food one or more of them would be on hand to snatch some of the weeds dangling from the coot's bill. The coots did not seem to mind the pilfering and often they stole from each other. The arrangement seemed satisfactory to all hands. A bit of investigating showed that the baldpates victimized not only the coots, but also some of the diving ducks, the redhead being the most frequent dupe.

The geese were the first southern arrivals to come down into the open water of the refuge lake. A day or two after the entire lake was cleared of ice many coots were observed in the large bay just to the right of the upper spillway. At the same time the number of those on the main reservoir was augmented. By week's end or four days after they were first sighted estimates ran as high as 3000. Canada geese continued increasing until their peak number within the refuge alone reached several hundred.

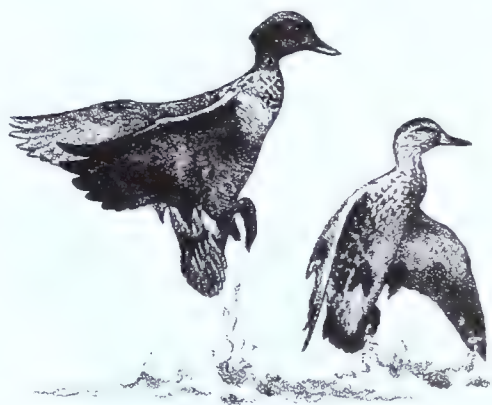


On that Sunday morning a pair of eagles soared so persistently and so low over the refuge geese as to cause a major portion of them to depart for other parts. It was interesting to note that when the geese were in flight they were unmolested by the predators. After those departing had cleared out, the eagles returned to harass those remaining behind. It is suspected that by putting the geese to flight the eagles hoped to more easily spot crippled or otherwise incapacitated individuals.

On the third Sunday or nearly three weeks after the first flight of geese, thousands of several species of waterfowl rested and fed on the refuge waters. The mallards, of course, were most in evidence, the harsh blares of the drakes coming from every quarter of the lake although the biggest bunch reveled in the shallows at the south end of Ford Island. Small bunches of geese could be seen winging about for no other reason than to be on the move. The resident geese seemed reconciled to the huge influx of visitors. When some of them did utter vocal objections to the close proximity of newcomers they were paid scant attention.

One of the more unusual incidents highlighting that drama of migration was the arrival that afternoon of a flight of baldpates. That throng of birds numbering at least a thousand chose to come down on a shallow backwater between the Corduroy Road and the southern environs of the refuge. The notoriously skittish birds were handsome to an extreme, their conservatively colorful plumage harmonizing perfectly with their habit of riding high on the water.

Throughout the afternoon more and more migrants arrived until the vast assemblage spread to every corner of the refuge, some species keeping to themselves others mingling freely with friends and strangers alike. All of them, however, seemingly gyrated about a handful of



swans and some scores of geese floating aloofly out in the middle of the lake.

Scattered among the more distant mallards were a few black ducks, the latter evincing a wariness apparently not shared by their carefree cousins. Here and there were small bunches of scaups or bluebills. A band of red-heads kept quietly apart on the deeper portions of the lake. The few green-winged teal on hand were easily discernible as they streaked in flight just above the surface. Several of these diminutive ducks feeding in a flooded alder thicket, were joined by a rare European widgeon, a species which closely resembles the common baldpate except for the white head crown of the latter. The widgeon has a buff colored crown. Had it been possible to thoroughly survey that unprecedented gathering of ducks and their kin some new records would have doubtlessly been posted. For instance, just off the Pennsylvania end of the causeway, three black (formerly known as American) scoters were positively identified, the first, it may be added, since the early days of the reservoir. This chunky sea-going duck seldom leaves its coastal habitat.

Near the half way mark of that sunny Sunday afternoon a small plane came out of the southwest. Sighting planes in the Pymatuning is nothing unusual. Indeed, for a long time pilots from the Youngstown, Ohio jet

base delighted in maneuvering their speedy planes over the area and it seemingly did not unduly alarm the waterfowl in the refuge. And had this particular plane kept its distance and height, it too, would have received but cursory attention. Instead, it began to slowly quarter back and forth over the western shoreline, each time painstakingly tracing its irregular windings. It was peculiarly mindful of the planes which are sometimes employed to locate the body of a drowning victim.

Even at a distance, and at its height of something like a thousand feet it looked strangely menacing. Its ominousness was intensified by the hush which gradually crept over the feathered clans in that part of the lake.

Following a maneuver which carried it away from the lake, the plane suddenly banked and then tipped into a steep dive to bore down on the completely silenced birds. Near the distant shore what looked like islands took swiftly to the air to break up into hundreds of ducks. Coots made for the withered weeds. The few swans together with a large segment of geese frantically took off as the plane dropped to tree height to shoot across the lake's widest point. Long before the plane circled for a return sally the waterfowl were wholly aroused and fighting for alti-

tude. How the pilot avoided hitting some of the wildly flying birds may be attributed to his consummate skill or to a luck which had already been worn threadbare.

In minutes, what had been an idyllically peaceful scene was changed to one of chaotic confusion. Soon the hill comprising the southeastern horizon was topped by a cloud of fleeing birds which more than matched the hill for size. The frenzied host was apparently making for the extensive Conneaut marshes several miles beyond.

Obviously satisfied with his handiwork, the pilot brought his plane about to pass low over Ford Island where up to this time a helpless and completely aroused Game Protector stood in a field from where he had witnessed the whole debacle. When overhead, the plane audaciously waggled its wings at the lone figure with upturned face. The flyer had played into the Protector's hands.

Identification could not have been more certain had the pilot dropped his calling card. Five minutes later the Protector was conveying the plane's number to the State Police barracks at Butler.

Early that evening when the little black plane landed at its home port the pilot was greeted by a brace of State Police officers. The "fun" he admitted having proved expensive.

SAFETY ZONE REMINDERS OPEN LAND TO HUNTING

Last year the Game Commission again provided cost-free safety zone posters to property owners who agreed to allow open hunting on their lands, except for the 150 yard zone around their residence and out-buildings.

The 1957 tally shows 2,149 farms not in Farm-Game Projects, having a total of 144,883 acres, used the safety zone placards and, as agreed in return for the service, did not post their property with trespass signs.

This is a Game Commission program that is growing in popularity with farmers who are so generous as to permit sportsmen to pursue wild game on their lands so long as the rules of safety are observed. The service is widely welcomed also by sportsmen who sometimes find it difficult to locate suitable territory on which to hunt rabbits and ringnecked pheasants.



Bill Anneman -- Young in Heart

By Frank Stout

IN 1906, fourteen Pennsylvania game protectors were shot at by hunters. Seven were hit; three died; three were seriously wounded and one only slightly wounded. Those were rough days and the role of the game protector, an innovation in the state, was misunderstood by many. That was the year William "Bill" Anneman became one of Pennsylvania's first salaried game protectors.

Today, in his 90th year, Bill Anneman looks back on that era with mingled amusement, awe and pleasure. From his home at Gilbert's landing on huge Lake Wallenpaupack, he

stays close to the deer, the fish and the eager men who seek them. This has been his life, as it is today.

About 40 years ago, he remembers, he was patrolling the Marshwood Lake woods above the coal valley near Scranton. He met there a tall, quiet young man who impressed him with his love of the woods and wildlife. The two men met often on the trackless mountainside and Bill Anneman decided to appoint the young man a deputy game protector. The young man was Merton J. Golden, now executive director of the Pennsylvania Game Commission.

Today, Bill Anneman drives his own car; scorns references to his age; plans many more hunts for deer in Wayne and Pike counties and when the spirit moves him, as it often does, he prowls the woodlands of

FRANK STOUT is on the editorial staff of the "Scranton Times" and writes a regular outdoor column. He is a member of the Pennsylvania Outdoor Writers Association and an active sportsman.

those counties casting an experienced eye for signs of small game, checking their food and cover. When Winter blasts across the Poconos and settles down on the 40 miles of Lake Wallenpaupack, Bill Anneman sets his tipups out on the ice and catches walleye pike when men one-third his age quiver and retreat from the icy wind.

Last December, for the first time in nearly 20 years, he trained his rifle sights on several deer but declined every one. Too small, he told his partners at a Clemo hunting camp. Members of his family knew that was only one reason. The main reason was he would feel obliged to leave the deer trails if he shot a buck. And he didn't want to do that and be forced to miss the companionship at the camp.

When he sighted his rifle over those deer last December, Bill Anneman also recalled that it wasn't always the same. Deer were as rare in his early days as elk are today in Pennsylvania. They were hunted in Pike County but it was a rough and tough proposition and only the experienced woodsman succeeded.

Bill Anneman first worked for the D. L. & W. Coal Company, now the Glen Alden Coal Company, in its electrical department. He was looking always from the spires of the collieries to the hills that frame the Lackawanna coal valley and even then—more than 60 years ago—he was concerned about conservation of wildlife and the natural resources which nourish it. He was a young, vigorous man who loved hunting and he believed that the licensing of hunters would be a steadying influence on the sport.

Bill Anneman began badgering legislators and newspapermen to urge a license law. In 1913, seven years after he became a game protector, he saw the law enacted. The fee then was \$1. His efforts to produce a license law was one of the reasons he was appointed a salaried game pro-

teCTOR—the first one, in fact, in Northeastern Pennsylvania.

As a game protector in those days, he also was expected to be fish warden, forestry inspector and farmer's friend in time of need. His territory covered Lackawanna, Wayne, Pike and parts of Susquehanna, Wyoming, Luzerne and Monroe counties. When he patrolled on foot or in a chugging Model T Ford, he was often gone from his home two or three weeks. He found his night's rest wherever darkness caught up with him—in a tent, a woodman's cabin, a farmhouse, barn or on a wooded hillside on a warm night.

After one patrol of two weeks, he returned home to learn that a sister had died and been buried. It had been impossible for his family to contact him to relay the tragic news.

He remembers native brook trout

CATCH OF YESTERYEAR, a morning's creel of brook and brown trout taken from Brodheads Creek in 1925, is admired by Bill Anneman.





FOX HUNTER Bill Anneman and three of his deputy game protectors pose for a picture following a hunt in the early 1920's. From left to right: Anneman, George Schwartz, Nelson LaCoe, and James LaCoe.

in small streams that flowed down the mountains west of Scranton. Today, those streams have disappeared into the maw of mine stripping holes or become so acid and rank from mine wastes they will support no life at all. The hills that gave cover to grouse, cottontails and the varying hare now are pocked with mine holes and ugly mounds of shale and coal rock.

Bill Anneman has seen all these things in a lifetime close to the woodlands and soil but he does not dwell on what has been. In his conversations with young hunters and fishermen who seek him out at the big lake, he points proudly instead to what is here now and tells glowingly of the healthy deer herd where none existed 40 years ago. He describes the strides in restoration of the wild turkey to a range where it once flourished and vanished.

On Feb. 2, his 89th birthday, he was honored at a Knights of Columbus Rod & Gun Club dinner in Scranton. When he was asked to step to the speaker's platform, the 200 sportsmen attending looked for a feeble old man. Instead, they saw a spry, ruddy-faced man with a full white moustache, soft, white hair and narrowed, dark eyes. His audience expected the rambling reminiscences of an old man. But Bill Anneman thumped the speaker's table with a hard fist and boomed:

"Get behind Mert Golden and the Game Commission, you fellows! Support 'em; help 'em, and you'll help yourselves!" And with that he sat down to a stunned outburst of applause. Bill Anneman had retired as a game protector 22 years before, after 30 years service, but his heart, apparently, never left the job.



WALKIN' SHOES

By NED SMITH

In Self Defense

By Ned Smith

1. How many dangerously poisonous spiders are found in Pennsylvania?
2. Rough handling will cause the opossum to abandon its pretense of being dead. True or false?
3. The copperhead poisons its victims by stinging them with its forked tongue. True or false?
4. The porcupine is one of the most dangerous of all animals for other wildlife to molest. True or false?
5. Hawks and owls defend themselves with their hooked beaks. True or false?
6. The box turtle defends itself by viciously snapping at its enemies. True or false?
7. Are there any poison-inflicting fish found in Pennsylvania?
8. What effect does winter have on the appearance of the snowshoe rabbit?

THE wild creatures that inhabit Pennsylvania today owe their existence, in a large measure, to whatever methods of self defense they have adopted. Each has been endowed by nature with the most suitable means of keeping its hide intact, and a study of these techniques will reveal some strange and ingenious devices.

Probably the most expedient defense for the majority of creatures consists of showing a swift pair of heels. However, in the case of those for whom speedy flight is neither possible nor practical Nature has devised various satisfactory substitutes. One of these is camouflage, the art

of escaping detection by matching one's surroundings.

The precocial young of ground nesting birds are completely dependent upon camouflage to bring them through the first perilous weeks of their lives. Watch a brood of day-old grouse chicks scatter at the first hint of danger and squat motionless on the leafy forest floor. As soon as they stop, they disappear as if by magic. Needless to say, such perfect camouflage has convinced many an observer that he hadn't really seen any chicks in the first place.

Protective coloration is found everywhere. The green katydid lives among leaves of the same color, the

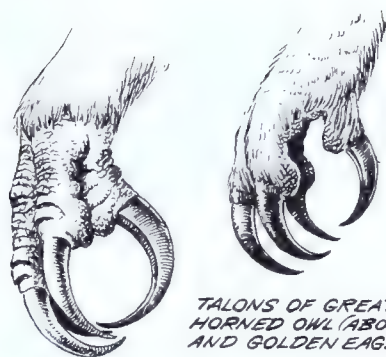
copperhead is almost invisible when lying on a bed of dead leaves, and even the big white-tailed deer melts into its woodland background surprisingly well. Some go a step further. The snowshoe rabbit, for instance exchanges its brown summer coat for a white one when the snowy season arrives. The bittern has learned to point its long bill skyward at the approach of danger, thus matching even more perfectly his background of reeds or cat-tails.

In the out-of-doors may who don't "carry a big stick" compensate for their lack of weapons by pure, unadulterated bluff. When approached by a snake a toad will inflate its body like a balloon, rising up on stilt-like legs, and even butting at the threatening reptile with its nose. I've seen a fence lizard employ the same ludicrous tactics when a bustling chipmunk nearly bumped into it.

When cornered, many birds will raise every feather on end, doubling or tripling their apparent size. Owls put on a particularly fearsome display of this type, their round, staring eyes adding immeasurably to its effectiveness.

Of all the bluffers, though, the hog-nosed snake reigns supreme. So convincing is his act, in fact, that this perfectly harmless serpent has for years been known by such horrendous appellations as "puff-adder," "blowing viper," and "sand viper." His very breath is thought by some misguided folks to be poisonous.

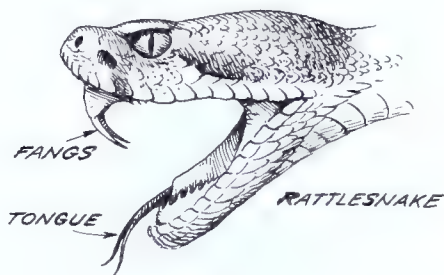
At the approach of danger the hog-nose spreads his head and neck somewhat in the manner of a cobra. His body is inflated with air, revealing a vivid pattern of markings ordinarily concealed by the close-fitting scales. If the enemy approaches too closely this air is expelled with a violent hiss and a sudden jab of the head. The effect is startling, to say the least, particularly if the observer doesn't know the hog-nose can't be induced to bite.



TALONS OF GREAT-HORNED OWL (ABOVE) AND GOLDEN EAGLE



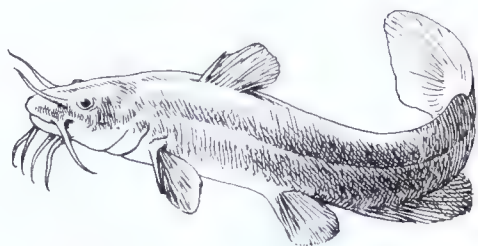
SNAPPING-TURTLE



FANGS

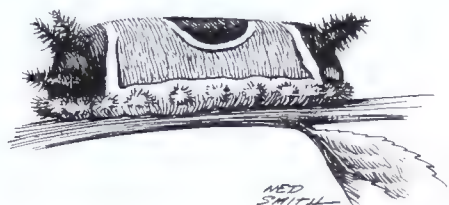
TONGUE

RATTLESNAKE

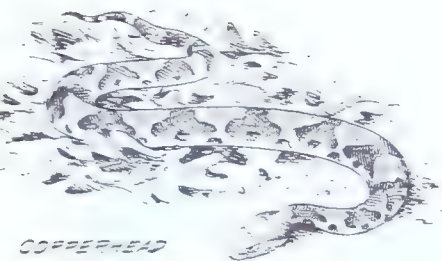


STONE-CAT

SADDLE-BACK CATERPILLAR



NED SMITH



COPPER-HEAD

BELOW-INTIMIDATION DISPLAY
OF GREAT-HORNED OWL



PORCUPINE

ENLARGEMENT OF QUILL



SKUNK-READY
FOR ACTION

If that bluff doesn't work the hog-nose will appear to be seized with violent convulsions, writhing in apparent agony until "death" stills his tortured body. The act is most realistic. Lying on his back in the dust, mouth agape and tongue protruding limply, he is to all appearances dead as a dodo. But turn him over on his belly and he'll immediately roll over on his back! Apparently he thinks he looks deader that way.

Our best known actor, however, is the opossum. This strange marsupial is often reluctant to feign death, but when he does so it is with unsurpassed determination. A dog can shake him 'til he all but flies apart, and he'll show nary a sign of life. But once the dog has discarded him in disgust and left for more interesting adventures Bre'r Possum will miraculously come to life and depart in the opposite direction.

Another tool of self-protection employed by creatures of widely different types is the discharge of vile smelling or distasteful secretions. The common toad, for instance, emits a peppery fluid that discourages the efforts of many animals to make a meal of it. Moles, foxes, and most of the weasel tribe give off a disagreeable odor. Many insects discharge malodorous fluids when annoyed, while one, the bombardier beetle, expels a small but visible cloud of this substance with an audible "pop." Most snakes give off a foul smelling substance when badly frightened, the water snake, the ringneck snake, and the hog-nosed snake ranking among the most offensive.

In the "smelly" category, of course, the skunk stands pre-eminent. Fortunately for everyone, he will oftentimes endure a surprising amount of annoyance before resorting to his smell gun—raising his tail and stamping his feet in warning. Pushed too far, he'll bend his body around so as to focus both eyes and rear end on his tormentor and let fly with demoralizing accuracy.

It is difficult to imagine a more over-powering substance. One drop will ruin your clothes, and a good skunking has been known to cause nausea, fainting, and a general state of abject misery. In the eyes it can cause temporary blindness or permanent damage. Small wonder that the skunk is given a wide berth by man and beast alike.

Among the birds of prey talons are the chief weapons of offense as well as defense, and formidable weapons they are. Ordinarily any of these birds will take wing when threatened by a human, but when trapped or cornered too closely they will go on the defensive. Suddenly flipping over on their backs they present a bristling array of talons to the attacker. The quaint-looking barn owl is one of the slickest defensive fighters in the business and can assume this position in the wink of an eye. Never give a sizeable hawk or owl an opportunity to clamp down on you. A great-horned owl, for example, can drive those hooks completely through your hand and maintain a grip so powerful as to defy your efforts to break it. The talons on a large great-horned owl

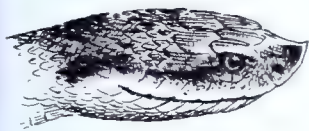
will measure about $1\frac{3}{4}$ inches in length on the outside curve. A red-tailed hawk's will measure nearly $1\frac{1}{2}$ inches. The same measurement on the tremendous rear talon of a golden eagle would amount to about three inches!

Biting seems to be a universally adopted defense measure. Grab practically any mammal and he will immediately retaliate by sinking his teeth into your hand. Many birds and reptiles will do the same, but some are better equipped for it than others.

One of the most vicious biters is a toothless reptile—the snapping turtle. He doesn't really need teeth. The razor-sharp edges of his horny jaws are infinitely more effective than conventional dentition. Lunging forward on his surprisingly long legs and striking with the speed of a snake he can snip off your finger in a twinkling. If he can't sever whatever part of your anatomy he gets hold of he hangs on with unflagging tenacity.

Most bites result in lacerations, but even more serious are those that are poisonous. Of these, our venomous

HOG-NOSED SNAKE



AT EASE



THREATENING



FEIGNING
DEATH

NED
SMITH

snakes are the most noteworthy examples.

The poison-inflicting apparatus of a snake is a cunningly contrived mechanism. The poison itself is contained in two glands in the head to which are connected, through ducts, the long, hollow teeth known as fangs. When a rattlesnake or copperhead strikes, these fangs are driven deeply into the victim's flesh. Muscular contraction forces the venom out through the hollow fangs like a hypodermic injection. Large animals, including man, are rarely instantly immobilized, but smaller enemies of the snake soon cease to be a threat.

Other creatures employ a mild poison for defense. Wasps, hornets, and other stinging insects are well-known examples. Not so familiar are the various poisonous insect larvae. One, the saddle-back caterpillar, is a short, stout pale green larva marked with a dark brown saddle. The hairs that decorate its body sting like nettles. Another larger green caterpillar generously covered with tufts of stinging hairs is the larva of the pretty io moth.

You might be surprised to know that we have poisonous fishes in Pennsylvania, too. Several of the smaller catfish have fin spines equipped with poison glands at their bases, as can be attested by many an angler who has been stuck by a stone cat with which he was baiting his hook. The sting resembles that of a bee—not usually serious, but not pleasant, either.

Larger catfish, as well as the sunfishes and others are equipped with sharp, erectile fin spines that surely must be a powerful deterrent to aggression.

King of the puncture artists, though, is the indolent porcupine, for Nature has fitted him with an array of the most fiendish devices ever to prick the skin of man or beast. Porcupine quills are modified hairs, thick and stiff, armed at one

end with a sharp point and loosely attached to the porcupine at the other. The business end is roughened with microscopic barbs. When under attack the porky merely humps his back and tucks his unprotected nose beneath his chest, presenting a thousand bristling quills to the enemy. The stout, quill-studded tail is a particularly effective weapon, lashing about furiously at the first touch from the attacker. On the slightest contact with the enemy the quills are transferred to the latter. The barbs cause them to relentlessly penetrate the flesh and as a rule the victim eventually dies either from starvation or from damage to vital organs which the quills have pierced. Most wild animals have learned to let the "quill pig" strictly alone, but it is common practice for hunters in porky country to carry a pair of pliers with which to de-quill their not-so-clever dogs.

It seems that most defense strategies among wildlife are based upon making the other fellow pay dearly for his brashness. One inoffensive reptile, the box turtle, has solved the problem in a much kindlier manner. He merely makes himself unavailable by withdrawing completely into his bony house and closing the door. No biting, no clawing. No spraying, stabbing, or poisoning. Yet how many creatures live longer, more contented lives than this pacifist of the raspberry patch.

ANSWERS

1. Only one—the black widow spider.
2. False.
3. False. It injects poison by means of its fangs.
4. True.
5. False. Their talons are their chief defensive weapons.
6. False. The box turtle is seldom vicious.
7. Yes. Some of the smaller catfish are poisonous.
8. With the advent of winter the snowshoe's coat turns white.



The Shootin'est Gentlemen and Their Ladies

By Will Johns

A raw, cold wind from the North rattled dried leaves over the ground. Overcast and grey, the sky held promise of snow. Indoors the television sets were bringing close-ups of the last and greatest of the year's gridiron classics.

The time—New Year's Day, 1958. The setting—Huntingdon Valley, one of Pennsylvania's finest country clubs. Located on the outskirts of Philadelphia, surrounded by historic mansions and modern split-level homes, this old and well-established Club is a center of suburban life and social activity.

Even on this drab, mid-winter day—for most people one of quiet relaxation at home by the hearth-side or TV set, the spacious club house and beautifully landscaped grounds of Huntingdon Valley were alive with Philadelphians and their families. Distinguished elder statesmen, smart young business executives, fashionable society matrons, gay college students home for the holidays, energetic youngsters brightly polished in their best party attire—all these filled the warm interior and cold exterior of this famous club with activity, laughter and excitement.



HUNTINGDON VALLEY'S Country Club President, Carl J. Asplund, left, and Col. Nicholas Biddle are shown here on New Year's Day, 1958 watching the trapshooting activities.

Anyone for golf? Tennis? Swimming?

Hardly! It was far from the season for these events on the country club calendar. It was, in fact, the time of years when most country clubs have long, blank pages on their activity schedules, especially for any sort of

outdoor event. Snow-covered fairways, wind-swept tennis courts, empty swimming pools—all leave country clubs as deserted and uninviting as air-force bombing ranges.

But here on January 1, 1958 it was actually the sound of gunfire that brought crowds of members and guests to Huntingdon Valley. Two 16-yard traps were in full operation, providing sport and competition for what may well be the most avid trapshooters in the East. Men, women and juniors all turn out, not only on this day, but on every Saturday from early November until late April to compete with shotgun and shell. The 28 shoots on the 1957-58 Huntingdon Valley club calendar, including several special events, are run with all the advance planning, excitement and competitive spirit of championship golf tournaments or tennis matches. For this modern country club, the shotgun game is the life-blood for



TROPHY TABLE at Huntingdon Valley is admired by Col. Nicholas Biddle, left, and Stephen M. Crothers, Jr., the "Iron Man" of Philadelphia trapshooting.



CONGRATULATIONS to the winners of the Col. Biddle Protection Race are extended by Mrs. Larry Hardy. Left to right: Mrs. Hardy, Charles F. Schilling, Mr. Larry Hardy, and W. R. Wilson. Mr. and Mrs. Hardy have been leaders in Huntingdon Valley's Trapshooting program for many years and have served as committee chairmen.

what otherwise would be the club's "dead" season.

The New Year's Day Shoot is highlighted each year by the Col. Nicholas Biddle Protection Race. Conducted annually since 1921, it is held in honor of a man who has served as president of the Huntingdon Valley Country Club, as president of the Pennsylvania Game Commission (and continuously as a member since 1935) and as a life-long leader in community affairs. Trophies are presented to the winning and runner-up teams, as well as to the individual man and woman high scorers.

In a trapshooting protection race, the competition is between teams consisting of two persons. If, for example, there are ten teams participating, they line up with the first ten team members on the left of position "three" of the five-position firing line. Their partners, or other half of the team, line up in order to the right of position "three." The teams shoot in

rotation. Before the command of "pull" is given for each claybird target, both members of a team get ready. If shooter "A" misses, shooter "B" can then fire to protect the score. If shooter "B" fires at a target his partner has broken, however, or shoots before his partner does, it counts as a lost bird for the team. Both shooters rotate from station to station and in firing sequence.

In this, perhaps the most exciting trapshooting event of the year, the contestants engage in friendly rivalry which includes a continual exchange of advice, banter and derision. Yet both men and ladies shoot with a sense of safety and seriousness despite the light-hearted fun. At Huntingdon Valley where there are so many excellent shooters, both men and women, the race is always a close one. There are many tie scores and extra rounds are usually the order of the day. Darkness was falling fast before the outcome of this New Year's Day

shoot was determined. The winning team, consisting of Charles F. Schilling, Meadowbrook, and W. R. Wilson, Jenkintown, finally emerged victorious in a shoot-off that tested both their eyesight and their skill with shotgun.

Such competition is characteristic of trapshooting at Huntingdon Valley, even as it is of traps the world over. And yet, nowhere is there more intense interest over such a long period of time. Saturday after Saturday club members and their families turn out to learn, to practice and to compete. The schedule of events is always different, never monotonous. Many of the twenty-eight shoots are trophy matches like the New Year's Day event, but many are unique in other ways. None, however, is more worthwhile than the last shoot of the season which this year is scheduled for Sunday, April 27th. This is the Abington Memorial Hospital Shoot to which all country clubs in the Philadelphia area are invited. An annual event since 1950, the shoot is the largest of its kind in Pennsylvania. Over 100 trophies are given each year in addition to many important awards such as the All-Country Club Championship. Originators of the shoot were Walter Eichelberger, Sr., of Rydal, an officer of a large corporation, a recognized authority on merchandising, and one of the most popular shooters in the Philadelphia area, and A. J. MacDowell. Mr. Eichelberger became the first chairman for this charity shoot and has served in this capacity ever since. All proceeds are donated to the Abington Memorial Hospital with the amount last year exceeding \$2,000.

Huntingdon Valley's outstanding trapshooting program does not just happen. As in any sport with as many participants, as fine facilities, and as much success, there are many people working behind the scenes. This Club is fortunate in having a very active, hard working group of members who



CHAIRMAN of the June Fete Charity Shoot for the benefit of Abington Memorial Hospital is Walter Eichelberger, Sr., of Rydal. This annual event is the largest of its kind in Pennsylvania and attracts shooters from all country clubs in the area.

believe wholeheartedly in the sport of trapshooting. Most, if not all, of them are avid sportsmen who fully realize the value of the old adage that practice makes perfect—and in this case, makes for safety. Shooting Committee members at Huntingdon Valley, under the general chairmanship of H. W. Cantley, include Joseph L. Doan, Barney Berlinger (former Olympic decathlon champion and star athlete at Penn), David J. Hasinger, Charles Schenkel, Charles Shilling, James Diamond, Frank Dudley and Walter Eichelberger. Special Committee Chairmen for the current year are: Trophies—Mr. and Mrs. Frank Dudley; Ladies Chairman—Mrs. Richard Hanscom; Friday Shooting Club—Joseph L. Doan; Targets & Shells—James J. Diamond; Publicity—Walter Eichelberger.

But the man who has been largely responsible for this tremendous shooting program at Huntingdon Valley—and perhaps for the high interest in trapshooting throughout the Philadelphia area—is A. J. MacDowell. A handsome, always smiling and soft spoken veteran of America's favorite shooting pastime, "Mac" conducts all of the shoots at Huntingdon Valley and serves as shooting instructor for this and other clubs.

Compelled to shoot as a professional until 1935 because he represented a Philadelphia jobber of guns and ammunition, Mac won the Professional Singles Championship and Professional All-Round Championship in 1928, 1930 and 1931. He was also a six-time holder of the Professional Doubles Championship in 1922, '28, '29 and 1930, '31, '32. Reinstated as an amateur in 1937, the Huntingdon Valley trapshooting in-

structor won the Amateur Doubles Championship in the state shoot held at the Roxborough Gun Club the same year.

When asked to account for this amazing interest, especially among women, in trapshooting at Huntingdon Valley and throughout the Philadelphia area, "Mac" explains, "It all goes back to 1918. In that year I was a member of the Atlantic Indians and was shooting at the Delaware Water Gap. Two of the star shooters were Annie Oakley and her husband, Frank Butler. Annie shot on our squad which consisted of Steve Crothers, Sr., Tim Carson, Harry Collison and myself. It was while shooting with the world-famous Annie Oakley, and at her urging, that I got the inspiration for starting the women of our country clubs in trapshooting." MacDowell returned to spark the flame of interest among Philadelphians who rapidly

SHOOTING INSTRUCTOR at Huntingdon Valley is A. J. MacDowell, shown here advising one of his pupils. A "champion" in his own right, "Mac" sparked the sport in country clubs throughout the Philadelphia area, starting in the early 1920's.





TRAPSHOOTING COMPANIONS for over fifty years are Steve Crothers, left, and A. J. MacDowell. Both have contributed much to the sport. Crothers' record includes a string of 486 breaks without a miss and was twice winner of the "Champion of Champions" event at Vandalia.

became "modern day" Annie Oakleys.

The Huntingdon Valley Country Club was the first to install trapshooting facilities, even before MacDowell's shooting program got underway. Shortly after 1900 a shooting trap was installed at the Club's former location on Old York Road above the Noble Railroad Station. Here a group of male members participated in the sport of blue rock shooting. The Shooting Committee in 1916 had Joseph Wharton Lippincott as Chairman with George W. Elkins, Jr., W. O. Rowland, Jr., Stevenson Crothers, Sr. and A. Heckscher Wetherill as the other members. This was followed by the Furlough Gun Club of Bryn Mawr where the first Women's League Match was held. The Sunny Brook Golf Club followed suit and by 1948 the Gulph Mills Golf Club, Valley Forge Gun Club, Meadows Club of Wilmington, Delaware, and the Torresdale-Frankford Golf Club had all installed clay-bird ranges and were represented by teams in the Philadelphia Trapshooting League. Last year the Aronomink Golf Club near Newton Square also

organized a gun club and installed two traps. MacDowell is presently instructing some of their women members in hopes of developing enough talent and skill to officially enter a team in the Philadelphia Women's League.

The Women commenced shooting at Huntingdon Valley Country Club in 1924 with Mrs. Nicholas Biddle as Chairman for five years. Among the first women shooters in addition were: Mrs. C. Louis Borie, Mrs. Daniel B. Wentz, Jr., Mrs. Wharton Sinkler, Mrs. William O. Rowland, Jr., and Mrs. Sydney E. Martin.

In 1925 Dominic Thomas was employed by the Club and has been in charge of the traps since that time. Today he and his brother keep the traps in perfect working condition, have charge of the shells and targets, operate them and score at inter-club shoots held at Huntingdon Valley. In addition Dominic is greens keeper for the Club golf course.

But even as A. J. MacDowell was helping popularize trapshooting at Huntingdon Valley and other clubs throughout the Quaker City area, his

long-time friend and shooting partner, Steve M. Crothers, Jr., was gaining fame as the "Iron Man" of Philadelphia trapshooting. On New Year's Day, 1958, the two were together once more—Steve showing his outstanding skill with shot and shell by breaking 24 x 25 birds and Mac too busy to compete because he was engaged in managing the shoot. Between shooting relays, these two old friends were busy reliving old times, other championship shoots, and the great days behind the traps in the years that have rolled by all too swiftly.

A "Champion of champions," Steve Crothers was born and still lives on what is left of a 95 acre farm in Chestnut Hill on the outskirts of Philadelphia. Suburban housing developments have taken all but a few acres surrounding the old family home in recent years. "Iron Man" Crothers' unique record includes a run of 486 breaks without a miss and he has won the Pennsylvania State Championship 14 times, the Amateur Championship of North America 5 times and the "Champion of Champions" event, held annually at the Grand American in Vandalia, Ohio, twice. In addition were countless local championship shoots around the city

MASTER EYE determination is explained by Col. Biddle to the daughter of Olympic champion Barney Berlinger, Miss Berlinger is a frequent participant in Huntingdon Valley's trapshooting events.



and state. For 15 years between 1925 through 1939, Steve and "Mac" shot together in almost every important shoot throughout the middle Atlantic area, Steve averaging 98.13 on 70,000 targets while MacDowell was averaging 95.72 on 45,000 targets. One of Steve's greatest days occurred at Yorklyn, Delaware some years ago when he broke 499 out of 500 targets. Mac's best string was 226 straight at the New York Athletic Club shoot in 1943.

Trapshooting has come a long way since 1866 when glass balls, filled with feathers, were first introduced as targets. Modern traps are a far call from those primitive attempts at simulating game in flight. Today the streamlined, automatic, push-button-operated traps at Huntingdon Valley and other country clubs throughout the area are the source of year-round fun for thousands of Philadelphians and their families. Here, as in countless other places throughout the nation, women like Mrs. Richard Hanscom, Mrs. Frank Dudley, Mrs. Nicholas Biddle and men like Col. Nicholas Biddle, H. W. Cantley, Walter Eichelberger, Frank Dudley, James J. Diamond, Charles Schenkel, A. J. MacDowell and Stephen M. Crothers, Jr. are leading the way to making America once again a nation of marksmen and expert shooters.

But in few other places is there such interest, competition and championship shooting as there is in the "City of Brotherly Love." The New Year's Day shoot at Huntingdon Valley Country Club was but a typical example of the love Philadelphians have for this fine American sport. Traps here and at other country clubs throughout the area, along with Philadelphia's famous Quaker City Gun Club, Roxborough Gun Club and Pine Valley Gun Club, throw over a half million clay targets each year.

And that, in any state or city, is one whale of a lot of clay!



Forest Management on State Game Lands

By Robert S. Lichtenberger

WITH remarkable foresight, some of the early day members of the Pennsylvania Game Commission knew that today's sportsman would need publicly-owned land if he was to have a place to hunt and fish without having to look at a "No Trespass" sign at every turn. In 1920 the Commission acquired the first tract, now known as State Game Lands No. 25 in Elk County, just a short distance from Johnsonburg. Since that time, approximately 904,000 acres have been added to this original purchase making the entire holdings over 910,000 acres in 63 of the Commonwealth's 67 counties.

R. S. "BOB" LICHTENBERGER is Supervisor, Food and Cover Section, Division of Land Management, Pennsylvania Game Commission. This article is based upon a paper delivered before a meeting of the American Pulpwood Association in York last October.

Each acre has been bought with money from the Game Fund although there has been some assistance in recent years from Federal Aid money. None of this land was purchased from state tax money or appropriated funds. The Game Fund consists of money from the sale of hunting licenses, revenue from the sale of products, fines imposed for violations of the Game Law, and minor sources of revenue that are held separately by the State Treasurer for exclusive use of the Commission.

The early purchases of Game Lands were centered in the northcentral portion of the state. Many of the tracts were lumbered just prior to acquisition so that in a few years there developed a bountiful supply of sprout growth and briars making ideal conditions for wildlife. During

the ten to fifteen year period that followed this extensive lumbering, the deer herd in the northern tier counties increased tremendously. In fact, Pennsylvania probably had the largest white-tail deer herd in the entire United States at that time. The herd, generally speaking, was in good physical condition and real trophy sized racks were available. When this condition finally started to diminish, our deer problem had its beginning. The troubles started when the forests grew into pole stage and larger timber. Winter losses increased rapidly and the deer literally and figuratively ate themselves out of house and home.

In the early years of land management there was relatively little accomplished except to maintain roads and refuge lines and to plant seedlings on open areas. By 1932 the Commis-

sion had acquired 32,000 acres of State Game Lands. The following year, six Civilian Conservation Corps camps were set up on Game Lands and with this aid, the management program was rapidly accelerated. Tree and shrub plantings were greatly increased, additional areas of wooded tracts were cleared for food strips, thinnings, and release cuttings were made in forested areas, and new roads and fire trails were constructed through hitherto inaccessible areas, thereby assuring better protection against fire on large blocks of land. During the late 30's the C.C.C. was joined by W.P.A., N.Y.A., and other Federal agencies, all of which aided materially in the land management program.

In these first years of land management there was little done about the sale of wood products as, na-

POLE STAGE TIMBER provides neither ideal game habitat nor valuable forest products. Large areas of this type of forest "set the stage" for winter losses in the deer herd.



turally, we had a relatively small amount to dispose of. In 1936 the first sale of sawlogs was made with the total revenue amounting to the large sum of \$790.00 for the fiscal year 1936-37. During 1937-38 revenue increased to \$8,210.00 and continued to expand at about that rate each year until 1946-47 when the total revenue amounted to \$152,357.00. During these post war years there was great demand for saw timber and records reveal 14,494,000 board feet were cut from Game Lands in 1946-47. In this same period 3,097 cords of pulpwood were cut. From the 1946-47 period to 1955-56 the increase was not as rapid for two basic reasons. First, the Commission began to realize we were getting into forest product sales on a large scale and this fast pace of selling could not continue without a thorough knowledge of what was saleable and what should be kept. In other words, a timber inventory and management plans were necessary. Second, another important game species, the wild turkey, was entering the picture on a broader scale and to promote expansion in the range of this much sought bird, we needed larger timber than was needed for good deer management.

For the period of 1947-48 to 1954-55 *average* sawlog sales were 2,036,200 board feet and 4,910 cords of pulpwood. In 1955-56 a very noticeable increase of sales was made and records show \$189,820.00 was paid for 10,555,108 board feet of sawlogs and 10,404 cords of pulpwood. The fiscal year that ended May 31, 1957, was the best to date from products sold and money received. Products sold last year included 14,188,552 board feet of saw timber, 14,707 cords of pulp and chemical wood, 680 tons of mine timber, 51,090 posts and props, and a small amount of miscellaneous material such as firewood and Christmas trees, for a total of \$363,550.00. This is the second largest source of revenue to the Game Fund—the sale

of licenses, naturally being first.

Earlier, management plans were mentioned. To date we have plans for 49 lands of the 198 individual Game Lands throughout the State. As you can see we have a vast amount of work to be done in this field.

A timber inventory study was started this past summer on lands not covered by management plans. As a starting point we selected some of the tracts in the Northcentral and Southcentral Divisions reasonably close to the pulp mills in these areas. Unfortunately we have few tracts of major pulp producing size near the mills here in the Southeast or in the Northwest Divisions. Within a few years we hope to have a thorough knowledge of timber conditions on our wooded tracts. Incidentally we are using the same technique in our inventory as that used by the Department of Forests and Waters. That Department has generously offered full assistance and much of the data assembled during the seven year span of their inventory work will be most helpful to us after we have completed our field work in typing and sample plots.

It has long been recognized by the Commission that one of the most economical and practical methods of providing desirable game habitat in forest areas is by selling merchantable timber. All cuttings are planned on a selective basis in order to obtain an uneven aged forest and the operations are conducted in such a manner as to prevent soil erosion. It has been proven that such cuttings are best from the wildlife standpoint, and on State Game Lands this demands careful consideration of the following factors:

1. **Condition of adjacent areas—**Where surrounding lands have been lumbered, with resulting excellent food and cover conditions for wildlife, we do not recommend extensive sales from the State Game Lands. To do so would not produce an un-



PULPWOOD CUTTINGS and removal of other forest products create openings in the canopy which encourage sprout and seedling growth. Tops and other slash add to the cover provided by increased ground growth. Food producing trees and shrubs benefit from the increased sunlight on the forest floor.

even aged forest for the area as a whole. If we should proceed otherwise, wildlife would experience several lush years followed by a long period during which conditions would again rapidly get worse. In such cases, cutting on the Game Lands is deferred until the adjoining areas show signs of no longer being productive of game food and cover.

2. Species of Trees and Shrubs to Encourage—In considering this factor, timber contracts and other cuttings are controlled in order to reserve sufficient nut and fruit trees to maintain a plant succession and forest balance favorable to wildlife species living on the area. Despite other factors, it is imperative to retain sufficient numbers of all tree and shrub species which provide food for wildlife. These need not be named here in detail but include many of our best timber producing species, such as Cherry, Ash, Oak, Hickory and Beech. Often diameter limit specifications plus the reservation of "den" trees will be all that is required.

3. Soil and Topographical Conditions—It is an established fact that the soils on steep upper slopes and on heavily burned areas are not nearly as productive as those on lower slopes or unburned areas. The establishment of uneven aged forests at such locations is difficult, as many times it is impossible to interest timber buyers unless they can operate profitably. Where we do have sales for these areas, a larger number of trees are reserved to assist in retaining soil. Skid roads are also a factor, as much soil can be lost if they are laid out with no thought of soil conservation. Usually our cutting blocks under these conditions are not more than 50 acres and scattered.

4. Market and Labor Conditions—Development of uneven aged stands on sites of good quality often depend on labor conditions and on markets. In locations that have close access to paper mills, coal mines, or chemical plants, smaller diameter wood can be cut than in those which will be of interest to operators of saw mills only.

5. Size and Species of Timber—

The size and species of timber regulate the amount of cutting that can and should be done on a given acre of land. Contracts that allow heavy or clear cuttings on forested areas result in dense, heavy growth for a few years which produce ideal conditions for wildlife. However, this is followed by a long period during which conditions become worse and good game conditions diminish until they disappear entirely.

One additional factor now has to be considered which was not a question when the first five elements of the cutting policy were formulated in 1949. This the question of chemical treatment for bark removal for pulpwood to be removed from Game Lands. This has been a controversial problem by all concerned. When the first chemical treatment was started on a large scale, it was felt by many that it would kill wildlife in wholesale lots. Research has proven differently. The main objections voiced more recently by sportsmen and wildlife workers are these:

1. Many of our sales are set up for winter cutting which then produces deer browse from tops of felled timber. A chemically treated tree does not furnish this.

2. We are vitally interested in producing sprout growth from any cutting in our principal deer range. Chemical treatment retards sprouting in some species and, in the case of Cherry, almost destroys any prospect of sprouting.

3. The aesthetic problem arises from many sportsmen. Most hunters purchase a license to kill game, but there is a good number who get their greatest pleasure from just being outdoors with a gun and killing is secondary. These persons voice their

objections to the "dead" timber on Game Lands.

From articles appearing in the "Pulp and Paper" magazine and similar publications it is evident that *mechanical* debarking is coming into the field of hardwood pulp production. The Game Commission will welcome the time when this form of debarking is used extensively in this state, which will permit us to make needed cuttings and still benefit wildlife to the fullest extent.

Management of State Game Lands presents a rather unique problem. As mentioned before, all of the tracts were purchased from the sportsman's dollar which gives the average license holder the thought he is owner of a portion of all lands. He also feels he has a right to voice an opinion as to how the lands are managed. If he is an ardent big game hunter, his wishes are for heavy cutting and lots of browse for deer. The dyed-in-the-wool turkey, squirrel, or 'coon hunter wants larger timber for mast production and natural environment of the species. And so it goes for each class of hunter and his particular whims and fancies.

The Commission feels that management of wooded portions of all tracts is primarily for wildlife, but sound forestry practices are given every consideration. Potential timber production areas that are now growing or will grow salable timber constitutes approximately eighty percent of the 910,000 acres. It is logical to think we will always be in timber production on a rather large scale in order to manage these 728,000 odd acres wisely. Sale of pulpwood is an important factor in the program and will continue to be given careful study and consideration in future management plans.



FIELD NOTES



Old Hunters Never Die

FAYETTE COUNTY—In January 1958 upon checking out the license applications issued for the 1957 hunting year, I was amazed to learn how many hunters were afield last fall with ages over 65. I had no trouble picking out applications in all age groups ranging from age 65 through age 88. The honors for the oldest hunter afield in my district for the hunting year 1957 goes to Tony Lewis of R. D. No. 1, Dunbar, Pa., age 88. This retired gentleman still believes in hunting for pastime and recreation. The youngest hunter I had afield checked out to be a true age of 10.—District Game Protector A. J. Ziros, Connellsville.

Just Me And My Shadow

UNION COUNTY—On January 20, 1958 Fish Warden Fry and I assisted Officers Sinsabaugh and Ranck to set rabbit traps in the Allenwood Ordnance grounds. In the course of the operation I observed a half grown groundhog in a thicket. On January 28, 1958, about 100 yards from where I had seen the groundhog he was safely secured in a rabbit trap and was in no hurry to leave when the trap was opened. The day was very cold and the ground covered with several inches of snow.—District Game Protector John S. Shuler, Lewisburg.



Litter-bugged Bunny

GREENE COUNTY—On January 18, 1958 I released nine dozen rabbits in my district. These rabbits were trapped in Allegheny County and turned over to me for release in my district. The following story was relayed to me by Mr. Albert Kerr of Springtown. After having released one dozen rabbits on his property he decided to distribute some corn for them to feed on, and while doing so he saw where a rabbit was losing much blood. After following upon the track he found the rabbit dead. He decided to see what had happened to it and after back tracking found it had run a piece of glass in its throat. The rabbit had only traveled about ten feet from the crate when the fatal accident happened. Mr. Kerr stated that he had put the broken glass there himself thinking that it would be out of the way and no one or nothing would get hurt from it. This backs up the slogan "Don't be a Litter Bug."—District Game Protector Richard L. Graham, Carmichaels.

Spotted Surprise

SOMERSET COUNTY—On January 23 when looking at some traps that were set near the West end of the Allegheny tunnel of the Pennsylvania Turnpike, I found a small skunk about one third the size of our native skunk. This animal was spotted instead of having the usual stripe of the typical skunk. Upon checking the PR Mammal Survey of Southcentral Pa., I found that the spotted skunk is not common in this region and has been found only in the southern parts of Fulton and Bedford counties near the Maryland State Line.—District Game Protector Edward W. Cox, Somerset.

—A BIG, BLACK SEDAN, AND HE WAS
ON MY SIDE OF THE ROAD!!



That Morning After

CARBON COUNTY—Possibly suffering a hangover from too much acorn juice the night before, a large black bear got off to a bad start in 1958. About 6:30 p.m., Jan. 1, the animal attempted to cross the Pennsylvania Turnpike in Hickory Run State Park. While traveling in the wrong lane, he met headon with an auto driven by Nicholas Maglio, Dunmore, Pa. Results of the crash; one bear that had to be destroyed because of a fractured leg and back; one auto with considerable damage plus the towing fee. Actual weight of the dressed bear was 345 lbs.—District Game Protector Duane E Lettie, Weatherly.

Ladies First

INDIANA COUNTY—Deputy Schrecengost of Canoe Township related the following to me: On a trip near Rossiter during the first week of October Mr. Schrecengost observed a hen pheasant sparring with a crow for a rabbit that had been killed on the highway. Upon arriving closer to the scene it was observed a cock pheasant was standing nearby watching the proceedings, while the hen fought with a crow. The crow left the scene as soon as the auto approached the scene.—District Game Protector A. J. Zaycosky, Indiana, Penna.

Ring-tailed Cat

SCHUYLKILL COUNTY—Recently I have heard several reports of species of "Ring-tailed Cat" which is supposed to be roaming the Blue Mountains in this vicinity. This cat has been described in many ways but always has a ringed tail like a raccoon. Last Sunday Mr. Jack Fidler of Oak Grove was fortunate in being able to kill a species of cat which would answer the description which has been given. This animal was grey with light brown rings on his tail and legs, weight was about twelve pounds and it was definite that it was a creature of the wild, however, we both drew the conclusion that it must have been born of a domestic house cat either in a wild or domestic state. Cats of this nature in a wild state must by choice take a big toll of the smaller game animals.—District Game Protector R. L. Shank, Pine Grove.

It's A Dog's Life

BERKS COUNTY—On January 28, 1958, Peter Bybel of Exeter Township reported that a gray fox had come up to his home during the afternoon and tried to get into a pen and attack his dog. The fox was caught and later died. On January 30, at the same location a raccoon approached the house during the afternoon and tried to enter the house and also tried to get into the pen to attack the same dog. They were not able to catch the raccoon.—District Game Protector J. A. Leiendecker, Reading.

WHY IS EVERYBODY
MAD AT ME?



Wander Lust

PERRY COUNTY—On November 25 I received a call from the Principal of the Green Park School. He informed me that one of the students of the school had found a bird at her home at Bridgeport the previous Saturday and had given it a burial in the garden, but had taken the leg band from it and had brought it to school. He told me that the Band bore the inscription "O. Div. WLDF 3-3101." I got the girl on the phone and she said it was a little brown bird that you could hold in your hand. This description did not help much toward identifying the bird, needless to say. So I asked the girl who had found the bird, Kathryn Sheibly, if she would dig it up. She said that she would, and when I visited her home I found it to be a Coturnix Quail. I immediately contacted Mr. Glenn Bowers, Chief of Research. He verified my identification and sent the band information to the Ohio Division of Wildlife who in turn sent back the information that the bird had been released at the Berlin Reservoir Wildlife Area, Portage County, Ohio, in connection with a field trial on October 26, 1957. And we think that our turkeys wander????—District Game Protector Russell Meyer, R. D. 1, Blain.

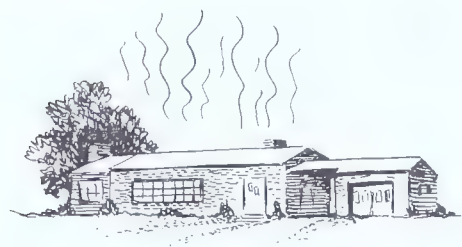
Those Good Old Days?

BUTLER COUNTY—Recently I moved into an old farm house. Among the papers laying about I found an old pelt record of some trapper or fur buyer. It dates back to December, 1864. In comparing the prices between then and now, I found there wasn't too much difference. For example: 6 raccoon—\$3.00; 1 opossum—\$.15; 2 skunks—\$1.00; 1 fox—\$2.50; 1 mink—\$3.50; 1 muskrat—\$.15.—District Game Protector Paul R. Miller, Butler.

Deer Caller

LUZERNE COUNTY—While patrolling in the Mt. Lake area on the 1st day of antlerless deer season I stopped at one of the land owners of a large estate. His caretaker was around the building because it was around 4:45 p.m. and it was his quitting time. I thought that I would stop and talk to him about how the deer kill was in this area, he told me that he could call 8 doe and one spike buck in at this time. I told him that I would like to see it done so he went into the barn and got some apples and started to call these deer in. Believe it or not, down from the woods came 7 doe and the spike buck which was limping for some reason. These deer came down to him and ate the apples out of his hand. He stated that someone probably shot the one doe and crippled the spike buck on the last day. Maybe this caretaker should hold instruction classes and show hunters how to call deer in by his method which would result in everyone bagging a deer.—District Game Protector Edward R. Gdosky, Kingston.





Indoor Trapping

BUCKS COUNTY—A true life saga recently proved to us that one's fur trapping activities should be limited to the wide and breezy out-of-doors.

One evening in December, an embryo trapper spied a "raccoon" cavorting in the cellar crawl space of his family's newly purchased home near Warminster.

Confident that his prowess at fur taking was equal to the cunning of his quarry, the young man purchased one muskrat trap from a nearby hardware store. With the dexterity of a north woods expert, he set his trap in the basement and took up the long vigil.

It was not long before the metallic snap was clearly heard throughout the quiet, early morning household. But the pungent and familiar odor that almost simultaneously permeated the air, came as quite a surprise. Doubtlessly, this also cast an unfavorable reflection upon our trapper's knowledge of natural history and wildlife identification.

Here was a situation that demanded the attention of the Game Protector! After considerable deliberation over tactics, followed by crawl space gymnastics, the prize pelt was adroitly removed with the aid of a now worthless raincoat.

Although this drama was concluded within an hour or two of its beginning, we feel certain that each moist, muggy day will bring subtle reminder of that night's misadventure for some months to come.—District Game Protector William J. Lockett, Doylestown.

Doves Desert Dixie

MONTOUR COUNTY—On January 31, 1958 when returning from Milton through Turbot township to Washingtonville I saw a flock of between 40 and 50 doves sitting in the trees at the Heddings farm.

I have seen a few doves in scattered parts of the district all winter but this is the only place I have seen more than 2 at one time. I am at a loss to know if these birds are "residents" or if they are a flock moving in from the South.—District Game Protector George A. Dieffenderfer, Danville.

S'no Rabbits?

BEAVER COUNTY—Quite a few hunters who complained last fall that there were not very many rabbits were surprised to find out that there are a large number left over. In training their dogs after the season and during the last month with a little snow on the ground, rabbits have shown up in large numbers. It is hard for them to believe that they were there all the time, only were taking refuge under ground or in a heavy cover. I have noticed on the game lands, in and around good cover that we have no shortage of breeding stock.—District Game Protector J. Bradley McGregor, Beaver.





Penn. State's Conservation Education Workshop

A Credit Towards Conservation's Future

(PART II)

By Joseph E. Simon

DURING my first week at the Conservation Education Laboratory, I learned to know my classmates very well. I spent many enjoyable hours listening to their experiences and their descriptive eloquence of the places they had visited. A few had crisscrossed the nation several times, others had toured Europe, while others had exciting hobbies. And so, with these wonderful friends, I looked forward to the remaining two weeks.

I don't recall of ever being lonely or noticing loneliness in the hearts of any of the others. In the evening after studies had been completed, a group would climb into my car or I would join another car load and we would head for the nearest dairy stand for ice cream, root beer or hot dogs. Sometimes if the day's activity had keenly whet the appetite, we would order all three.

In order to further our consideration of each other, we all contributed

to a special fund and elected George Dunkle from Girard College, to take care of our finances. The money was used to buy birthday cakes for several of our group and to buy little remembrances for members of the staff who had contributed so much for our benefit.

I mention this as evidence of the generosity and deep feelings of the group for each other and for those who instructed them. In general, it can be said that those who are considerate of our natural resources are considerate of each other.

Since Dr. Whitcomb had dwelt with the geological formation of the earth, it was only natural that Professor H. W. Higbee from the Agronomy Department of the University should dwell on soil characteristics and the importance of these characteristics in soil conservation. I marveled at his ability to look at the plants growing on a particular area and accurately describe the soil be-

neath them. It became quite apparent to me that the life a soil supports can be no better than the soil itself.

"Poor land makes poor people, and poor people make poor land."

The day following Professor Highbee's field trip, I watched members of the class lay out contour strips under the direction of A. E. Cooper, Professor of Agronomy Extension. I gathered from Professor Cooper that the idea behind contour strips was to make rain water walk down the slopes rather than run. Whenever the speed of run off water is doubled, it's soil carrying capacity is increased to the sixth power. Likewise if the speed of water can be cut in half, its soil carrying capacity can be reduced by the sixth power.

The next very interesting day was spent with Millard Crooks from the

Pennsylvania Game Commission and R. G. Wingard, Assistant Professor of Wildlife Management Extension.

I knew that hunting was big business, but I didn't realize how big until these instructors gave us the facts. We were told of a survey conducted in Potter County that showed an expenditure of one million dollars by the deer hunters who visited the County during a two week deer season. This amount did not include the money spent by the hunters for hunting equipment. It was also stated that there are a million hunters in the State of Pennsylvania. The original appropriation to the Game Department was \$800; the amount today is \$4,000,000. The average amount spent per hunter in the United States each year exceeds \$90.00. The total amount spent by all the hunters in the United States

VALUES OF FERTILE SOILS are explained to teachers at the Conservation Education Laboratory by Harry Myer, third from right, on his farm about 30 miles from State College.



exceeds the amount spent for baseball, basketball and football combined.

The next remark about automobiles killing more small game than the hunters caused me to think back over the thousands of small game carcasses I had seen on the highways during my years of driving. I had noticed the highest mortality during the spring and summer. At this time it is safe to assume that for every female animal killed on the highway, four or five young were probably lost to starvation, the elements or to predators. If a means could be devised to stop this slaughter, there would be more game for more hunters.

According to Assistant Professor Wingard, Wildlife Management is involved with keeping wildlife under control and all living things in balance. Of these, keeping wildlife in balance is the most difficult. Upsetting the balance can lead to considerable difficulty. Much damage has been done to our wildlife because of not understanding their balance.

The shortage of rain fall during the summer of 1957 caused more than the usual interest in John Gittins' discussion of the Waters of the Commonwealth. John Gittins is Secretary of the Sanitary Water Board and he had many reasons to be proud of the accomplishments of the Board. Streams that a few years ago were choked with the waste from mines or manufacturing plants are now flowing clean and pure. It is quite possible that future generations will be able to fish in every stream in Pennsylvania. The Sanitary Water Board has the supreme power to clean up the streams and it is cleaning them up methodically and with fairness to those who have been polluting them. Clean streams will mean more places to swim, more places to fish, more water for irrigation, more water for manufacturing and more water for just plain living. Manufac-



BIRD WATCHERS Connie Silveus, with binoculars, and Dorothy Moser spot something of interest on one of the many field trips.

turing plants are huge consumers of water. A steel mill for instance, will use 65,000 gallons of water to make a ton of finished steel. If we want more industries in our State, or if we want those we already have to remain, we must provide them with clean water.

Our next field trip was to the Harry Myer farm, about 30 miles from Penn State. This trip had been arranged by Charles B. Slaton, Assistant State Soil Conservationist. Here we saw what was once abandoned land, brought back to a high state of fertility by good conservation practices. The Myer farm was an outstanding example of wise land use. The farmable land was laid out in efficient long contour strips, a beautiful sight to see. The pastures were growing luscious grasses and the slopes too steep for cultivation or pasture were planted with evergreens and food plants for game.

Announcing . . .

CONSERVATION EDUCATION LABORATORY FOR TEACHERS

1958

First Session—June 30 to July 18

Second Session—July 21 to

August 9

The Conservation Education Laboratory at Pennsylvania State University is conducted to help elementary and secondary school teachers obtain a better understanding and appreciation of our natural resources.

The Laboratory is a full-time program of study. No other course work may be taken concurrently. A number of part-session courses will be available which will enable a student to earn three credits in addition to those completed in the Laboratory so that a total of six credits may be earned during the six weeks of the Main Summer Session. The Laboratory is open to both men and women students. The same admission requirements are applicable to the Laboratory as are in effect for students enrolling in general courses in the Summer Sessions.

Scholarships provided by various cooperating organizations are available for Pennsylvania teachers. You are urged to apply for them as early as possible.

For further information, write: Professor H. C. Kranzer, Room 311 Burrowes Building, Pennsylvania State University, University Park, Pa.

The most amazing conservation practice seen on the farm was a broad waterway engineered by the Soil Conservation Service. This waterway carried most of the run-off from the Myer farm. The many deer tracks indicated how much the deer were enjoying the legumes planted on the waterway to hold the soil. Before good conservation practices had been adopted, the waterway was a deep gully providing neither food nor cover for game. Contrary to general belief, game animals and game birds do not prefer to feed and raise their young on wornout, abandoned lands. They prefer the highly fertilized fields because the plants growing on these fields contain more of the body building minerals, especially calcium and phosphorous so vitally needed by all living things.

As I mentioned earlier, generosity and friendliness are the characteristics that mark the true conservationist. This was very true of Harry Myer and his family. After our tour of his beautiful farm had been completed, we were their guest at a delicious picnic dinner on the banks of their farm pond.

After learning how farms should be handled for maximum crops of game, we next toured State Lands, to study the problems of game management under forest conditions. It was easy to see why grey squirrels and turkeys prefer tall mature timber stands, while deer, pheasants, quail and rabbits prefer more brushy land. Modern forest practices require the removal of all branches from the trees for a height of 16 feet or more. With the tall trees shading the forest floor, plant growth is greatly restricted, leaving little or nothing on which deer can browse. Although deer were originally a browsing animal, they are, through necessity, becoming a pasture animal.

With the second week of the Conservation Laboratory drawing to a close, I retired to my room to think

of the many things I had learned during the week and to jot down a few conservation concepts that had formed in my mind:

1. The collecting of license fees, the setting of hunting dates and bag limits are but a small part of the work of the Game Commission. The big task is to provide conditions for game to survive and multiply; this requires years of research and study.

2. Highly nutritious food is the primary requirement of all game; without it they can neither develop to their maximum size or survive our winters.

3. Game land should be limed and fertilized the same as farm land. Poor land can produce only small crops of stunted, weak game.

4. Our game is at the mercy of conflicting interests. Modern farming means the removal of brushy fence

rows. This robs game of cover and nesting sites. So does forestry practices that keep the forest floor as clean as a living room floor. The privacy of game land is constantly being invaded by highways seeking the safest, shortest route.

5. The average motorist is not fully aware of the damage he is doing to wildlife. Reducing the destruction of game on our highways would without extra cost give us better hunting.

6. Good hunting can contribute millions of dollars to the business life of a community during the year.

7. Sportsmen's Clubs by advancing the cause of conservation, are doing much to make our State a more beautiful, a more healthful, and a more bountiful place in which to live.

. . . To Be Continued

HILLSIDE PLANTING of evergreen trees was a center of interest on the Harry Myers farm. Such plantings provide cover for wildlife, help hold the soil in place, and slow up the run-off after heavy rainfalls.





Game Commission Announces Reopening of Training School

Ninth Student Officer Class To Be Enrolled July 1, 1958

The Ninth Class of student officers to be trained for positions as Pennsylvania Game Protectors will soon be selected by the Game Commission. Successful applicants will be enrolled for training at the Ross Leffler School of Conservation located near Brockway, Jefferson County on or about July 1, 1958.

Approximately 25 men will be selected by competitive examination for this class. Any male, bona fide resident of Pennsylvania not less than 21 and not more than 35 years of age, with a minimum weight of 140 pounds and a height of 5 feet 8 inches and an educational background or training equal to a four year high school graduate course is eligible to apply.

The Pennsylvania Game Commission inaugurated its first in-service training program for field personnel in 1932. This training for regular employees proved so effective that by 1936 the Commission established a fixed policy that all future field officers would be selected by competitive examination, followed by an intensive course of training. A Conservation School, later known as The Ross Leffler School of Conservation, was established and the first student officer class was enrolled on July 2, 1936. Since then the School has graduated 185 officers in eight previous classes, the last of which finished their formal training on March 16, 1957.

Two full-time instructors for the new class have been assigned by the

Commission. Donald E. Miller, Reading, presently Law Enforcement Assistant in the Southeast Field Division Headquarters, has been named as Superintendent. Calvin A. Hooper, New Castle, presently a District Game Protector, has been designated Assistant Superintendent. Both men are graduates of the Conservation School, Miller receiving his initial appointment as a graduate game protector in June, 1938 and Hooper in June, 1949.

Complete information, including brochures and application blanks, for this student officer class can be obtained from the Game Commission at Harrisburg. A brief outline of the general qualifications and regulations follows:

Residence Requirements

Each applicant shall have been a bona fide resident of the Commonwealth of Pennsylvania for a period of not less than one (1) year immediately preceding the closing date for application. To qualify as to residence, any applicant who was absent



Donald E. Miller
Superintendent
Ninth Student Officer Class
Ross Leffler School of Conservation

from the State because of military service, college attendance, etc., and who has not transferred his residence to another state will be considered a resident of Pennsylvania.

Age Requirements

All applicants shall have passed their twenty-first (21st) birthday and shall not have passed their thirty-fifth (35th) birthday prior to June 30, 1958. Deputy Game Protectors will be credited two years over and above the age limit of thirty-five for each five (5) years of Deputy service, but must not have reached their fortieth (40th) birthday prior to July 1, 1958. All applicants are required to furnish birth certificates prior to admission to the School.

Height Requirements

The minimum shall be five feet, eight inches (5'8") taken in stocking feet, the maximum to be in relative body proportions satisfactory to the Commission.



Calvin A. Hooper
Assistant Superintendent
Ninth Student Officer Class

Weight Requirements

The minimum weight shall be one hundred forty (140) pounds stripped of all clothing. The maximum shall be two hundred (200) pounds stripped of all clothing up to six feet (6') in height, but an additional allowance of ten (10) pounds will be made if the applicant is more than six feet in height.

Vision Requirements

Before any applicant shall be admitted to the School, he shall be able to pass a 20/30 vision and color test without glasses.

Physical Examination

Each applicant shall be subject to a rigid physical examination and shall be free from all physical defects including the shortage or loss of a member of the body. A preliminary physical examination conducted by a registered physician of this State shall be made a part of the application, the cost of which shall be borne by the applicant. The final physical examination shall be made by a registered physician appointed by the Commission or its agent, the cost of which shall be borne by the Commission. The certification of the Commission's physician shall be final.

Rates of Compensation

Students selected for training at the Conservation School will be paid a minimum of \$100 per month and a maximum of \$175 per month, depending on their marital status and number of dependents. In addition, students will receive maintenance and subsistence during the time they are receiving specialized training at the School and necessary traveling expenses during the time they are engaged in field work.

Assignment to Duty

Applicants must signify their willingness to accept assignments to duty during the training, probationary period and regular duty at such geographical locations as the Commission or its agents shall select without regard to the location from which the student was recruited. Trainees who successfully complete the course at the School and in the field will be assigned duty as game protectors, supervised by a Field Division Supervisor, on a salaried basis during a one-year probationary period from the date of graduation at the beginning salary of a Game Protector, currently \$3925 per year. Upon satisfactory completion of the probationary period, they will be assigned to existing vacancies in the field service.

How to Apply

No completed application will be considered except those submitted by Registered Mail on the official form provided for the purpose. The application must contain specific information, sworn or affirmed before a proper public official. If any application is returned for verification, correction or additional information, the corrected application must be resubmitted by Registered Mail within the date and hour prescribed. All applications shall be transmitted to the "Executive Director, Pennsylvania Game Commission, Harrisburg, Pennsylvania."

Competitive examinations will be held at Harrisburg, probably during late April or early May. A definite time and place will be announced through newspapers and other public information media.



Pennsylvania Hunters Harvest Over 105,000 Deer; Take of Legal Bucks Highest in State's History

Over 105,000 legal deer were taken in three separate seasons by Pennsylvania hunters last year. A complete tally of the harvest, just released by the Game Commission after weeks of carefully counting big game kill reports mailed to Harrisburg by successful hunters, shows 1957 was a historic year in the annals of Keystone State deer hunting. The official figures show a kill of 49,254 legal antlered deer and 55,862 legal antlerless whitetails for a total of 105,116.

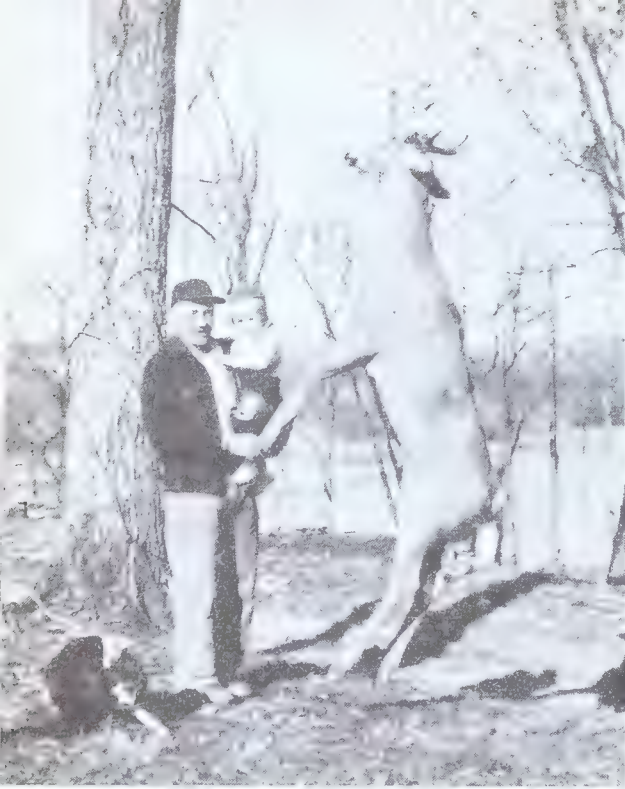
The "buck" kill of 49,254 legal animals was the highest in Pennsylvania's wildlife conservation history, at least in official record books which

date back to the year 1915. In the first recorded harvest that year, only 1,287 legal antlered deer were reported. Since then, the kill has exceeded 40,000 bucks in only six years. These were: 1939—49,106; 1940—40,995; 1949—46,602; 1954—40,915; 1955—45,044; and 1956—41,921. The previous record kill of 49,106 in 1939 followed a year in which there was no open season on antlered deer. During the statewide open season on antlerless deer in 1938, 171,662 "does" were taken.

The harvest of 55,862 antlerless deer during 1957 resulted from the issuance of 334,708 special licenses, required by law and sold through

IN-SEASON STUDY OF DEER HARVEST occupied the Game Commission's research biologists like Steve Licinsky, left, who checked hundreds of deer in northwestern Pennsylvania last December. Examination of teeth on deer's lower jaw enables accurate age determination.





BIG BUCK was bagged by Clark Brownwell, Landisburg, in Perry County during 1957 season. Here he shows his young grandson a "granddaddy deer" that weighed 200 pounds and had a 10-point rack with a spread of $21\frac{1}{4}$ inches.

the Department of Revenue. There was no open season on antlerless deer in 1956; the last open season was during 1955 when 41,111 were taken under the special license system.

Included in the 1957 totals are the deer bagged by archers during a one-week "any deer" season last October. The bowmen accounted for 376 legal bucks and 982 legal antlerless deer—a total of 1,358 of these big game animals. This, also, was a new record for deer killed with bow and arrow in the Keystone State. Bowhunters, rapidly increasing in numbers since the first Special Archery season was established by law in 1951, totalled 55,554 last year according to preliminary figures released by the Department of Revenue which handled the sale of the Archery licenses, required in addition to the regular hunting license. The bow and arrow kill of antlered deer in previous years was: 1951—32; 1952—25; 1953—84; 1954—55; 1955—119; 1956—224.

Actually, the true figures on the

1957 deer harvest are known to be considerably higher than these official figures. Field investigations made by the Commission's representatives during last year's deer seasons were compared with the postcard reports turned in by hunters. This study indicated that many hunters who bagged a deer last year did not cooperate in mailing their big game kill report card, despite the fact that such a report is required by law and widespread publicity was given last fall urging successful hunters to report their kills. The Commission pointed out that without such cooperation, and accurate figures on the actual deer harvest which would have resulted, the setting of future deer seasons would be made much more difficult.

During the 1957 bear season on Pennsylvania's only other big game species, 294 legal bruins were bagged in the Keystone State according to final figures. This harvest was below the average in recent years. In 1956 the bear kill totalled 335; in 1955 it was 363. The record harvest of Pennsylvania black bears was established in 1924 when Keystone State hunters took 929 legal animals.

In other hunting seasons last year, Pennsylvania small game hunters took more raccoons, wild turkeys, ringneck pheasants, bobwhite quail and mourning doves than they did in 1956. The official game kill figures, based on estimates by the Commission's field officers, show the take of other small game and migratory birds were lower than a year ago. Commission officials consider 1957 as being a generally satisfactory year, however, for most Pennsylvania hunters. It is pointed out that despite excellent weather conditions during the 1957 breeding season, the extremely dry summer that followed may have adversely affected wildlife food and cover conditions, bringing about changes in the normal habit of many small game species and reducing the harvest in certain areas.



ANOTHER FARM COUNTRY BUCK was bagged by William C. Reppert, of Lebanon, while he was hunting near Cornwall Furnace during the 1958 season. This deer weighed 96 pounds on the scales and had a real trophy rack.

Official 1957 Game Kill

<i>Species</i>	<i>Season of 1957*</i>	<i>Season of 1956*</i>
	<i>Number</i>	<i>Number</i>
Deer, Legal Antlered	49,254**	41,921***
Deer, Legal Antlerless	55,862**	(Closed)
Total Deer	105,116	41,921
Bears	294	335
Rabbits	1,455,862	1,530,062
Hares (Snowshoes)	1,614	1,969
Hungarian Partridges	(Closed)	(Closed)
Squirrels	728,342	939,127
Raccoons	139,397	129,527
Wild Turkeys	16,156	14,481
Ruffed Grouse	41,694	49,847
Ringneck Pheasants	465,955	446,266
Quail	12,057	10,417
Woodcocks	9,854	11,126
Crails, Gallinules & Coots	5,609	6,835
Crackles (Blackbirds)##
Wild Waterfowl	64,625	77,616
Woodchucks	311,497	326,044
Doves	39,699	24,838
Total Number	3,397,771	3,610,411

* Small Game, based on Field Officers estimates; Big Game, based on individual reports filed by hunters.

** Includes 1,358 Deer killed during the 1957 Special Archery Season.

** Includes 224 Deer killed during the 1956 Special Archery Season.

Unprotected—No data.

PENNSYLVANIA GAME COMMISSION
LEGAL BIG GAME KILL
 (Based on Tabulation of Game-Kill Reports)

COUNTIES	Deer— Legal Antlered		Deer— Legal Antlerless		Bears	
	1957	1956	1957	1956	1957	1956
1 Adams	378	252	302	....	....	....
2 Allegheny	103	60	55	....	....	....
3 Armstrong	472	332	319	....	....	....
4 Beaver	119	73	54	....	....	....
5 Bedford	969	750	654	....	3	....
6 Berks	626	411	659	....	....	....
7 Blair	664	577	351	....	2	....
8 Bradford	1,282	1,131	1,690	C	2	21
9 Bucks	274	199	343	....	....	....
10 Butler	464	346	387	....	....	....
11 Cambria	718	464	638	....	....	....
12 Cameron	572	589	616	....	34	5
13 Carbon	796	616	913	....	10	3
14 Centre	1,840	1,809	1,385	....	15	14
15 Chester	121	91	118	....	....	....
16 Clarion	799	579	618	....	8	14
17 Clearfield	1,201	1,182	792	L	9	14
18 Clinton	1,229	1,179	494	....	29	18
19 Columbia	564	424	785	....	....	....
20 Crawford	471	345	616	....	....	....
21 Cumberland	396	336	387	....	....	....
22 Dauphin	546	433	533	....	....	....
23 Delaware	5	4	16	....	....	....
24 Elk	1,658	1,771	2,808	....	21	2
25 Erie	281	222	440	....	....	....
26 Fayette	409	288	248	....	....	....
27 Lawrence	78	54	42	S	....	....
28 Franklin	792	630	624	....	....	....
29 Fulton	521	400	414	....	....	....
30 Greene	146	69	103	....	....	....
31 Huntingdon	1,438	1,287	973	....	1	....
32 Indiana	706	549	693	....	....	....
33 Jefferson	894	772	877	....	10	1
34 Juniata	306	417	461	....	....	....
35 Lackawanna	481	387	508	....	5	....
36 Lancaster	101	52	102	....	....	....
37 Lawrence	78	54	42	S	....	....
38 Lebanon	266	207	441	....	....	....
39 Lehigh	137	88	116	....	....	....
40 Luzerne	1,266	982	1,039	....	6	....
41 Lycoming	1,849	1,631	1,726	....	34	3
42 McKean	1,749	1,632	3,135	....	7	1
43 Mercer	180	128	132	....	....	....
44 Mifflin	570	490	455	....	2	....
45 Monroe	1,190	1,105	1,262	....	13	1
46 Montgomery	132	82	196	....	....	....
47 Montour	56	36	88	....	....	....
48 Northampton	193	151	180	E	....	....
49 Northumberland	269	216	418	....	....	....
50 Perry	946	680	823	....	....	....
51 Philadelphia	....	....	....	....	....	....
52 Pike	1,194	1,366	1,778	....	18	2
53 Potter	2,514	2,078	2,860	....	8	1
54 Schuylkill	1,387	968	1,798	....	....	....
55 Snyder	512	238	367	....	3	....
56 Somerset	1,491	988	1,572	....	1	....
57 Sullivan	1,229	1,115	1,922	....	5	2
58 Susquehanna	748	655	1,303	D	....	....
59 Tioga	1,382	1,371	1,715	....	12	1
60 Union	352	340	436	....	10	....
61 Venango	902	792	929	....	1	....
62 Warren	1,428	1,404	2,861	....	10	....
63 Washington	128	55	75	....	....	....
64 Wayne	1,480	1,244	2,000	....	1	....
65 Westmoreland	1,130	812	979	....	....	....
66 Wyoming	484	379	843	....	2	....
67 York	249	183	263	....	....	....
Unknown	30	30	38	....	2	....
Total	49,254*	41,921**	55,862**	....	294	3

* Includes 1358 deer killed during the Special Archery Season.

** Includes 224 deer killed during the Special Archery Season.



Harrisburg Patriot News Photo
MINNESOTA LEGISLATORS visited Game Commission offices in Harrisburg in early March to study wildlife administration in Pennsylvania. With Executive Director M. J. Golden, seated, are, left to right: Donald McLeod, Loren Rutter and Harry Basford.

Caution Is Urged In Stocking Wild Turkeys From Commercial Sources

The phenomenal increase in the population of Pennsylvania's wild turkeys during the 1940's resulted from the application of sound game management practices which combined with natural conditions to encourage the development and spread of the flock.

In the last few years a number of interested sportsmen's clubs have bought and released Eastern Wild Turkeys in areas where more of the birds were desired. In some instances the club-bought birds were healthy, wild stock; in others precautions were not taken to assure that the birds,

sometimes reared under domestic conditions, would not carry disease onto the range to eventually cause serious loss among the naturally-raised turkeys already there.

The state's wildlife people are somewhat concerned about any indiscriminate releasing of turkeys, though the motive behind the practice is admirable. Experience has shown that when wild turkeys come in contact with domestic poultry the introduction of disease into the wild flock may occur. The Wildlife people point out that raising and releasing wild turkeys poses problems not present in the raising and releasing of ringneck pheasants.

M. J. Golden, Executive Director of the Game Commission therefore recommends this solution that offers the desired precaution: The Commission will gladly provide the services of one of its game propagators to examine wild turkeys sportsmen intend to release, to determine first whether they are healthy birds. Such an action would eliminate the possibility of infecting the priceless flock already in the wild. This recommendation is made in the belief that sportsmen who will spend their money in the interest of their sport will cooperate. Certainly they have no intention of impairing the exceptional turkey hunting already available in the Commonwealth.

The Executive Director points this out, also: The Game Commission is now stocking additional areas of the birds' range with Eastern Wild Turkeys reared at the State Wild Turkey Farm. When a large population of these great birds became established in the better localities the state's turkeys were then liberated in the fringe areas. This was done in the hope the outlying coverts would eventually support more of the birds and spread the flock over additional territory, so that an increased number of hunters may enjoy turkey hunting success nearer home.

SIGN

of the

Flying Goose

U. S.
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

U. S. FISH & WILDLIFE SERVICE TO ESTABLISH NATIONAL WILDLIFE REFUGE IN CRAWFORD COUNTY

For the first time in the wildlife history of Pennsylvania the federal government, through the Migratory Bird Conservation Commission, has formally approved acquisition and establishment of a national waterfowl refuge and hunting area in this state. At a meeting in Washington, D. C., March 11, the Federal Commission approved the acquisition of the proposed Erie National Wildlife Refuge in southeastern Crawford County.

The Erie National Wildlife Refuge will comprise a total of 6,161 acres. Presently the area consists of the following soil cover types: Timber, agricultural, abandoned cropland, grass, brush, and marsh. It is anticipated that at least 25,000 migrating geese and 75,000 ducks will use the site. With improved nesting conditions it is expected that 2,000 waterfowl will be produced there annually.

This refuge will greatly enhance that portion of the Atlantic Flyway located in northwestern Pennsylvania by providing much feeding and nesting grounds. Later, the establishment of additional nesting habitat will add to the value of the area.

The land there is highly suitable for refuge purposes inasmuch as many wild waterfowl utilize that sector. From the standpoint of wild waterfowl the northwestern part of Pennsylvania is the most important, excluding the Delaware, Susquehanna and Allegheny Rivers. Natural conditions there lend themselves to im-

provements that will benefit the waterfowl. Marshes like those found in Crawford County provide excellent hunting for wild ducks and geese, and when the gun pressure becomes too heavy these fowl find refuge in a sanctuary such as the one proposed.

In 1954 the Pennsylvania Game Commission started a small marsh impoundment program to improve conditions for wild waterfowl. Fifteen impoundments in the northwestern counties containing 160 acres of water have been completed. Seventeen others, which will eventually impound nearly 265 additional acres, have been approved and will be started this spring. Sixteen of the last mentioned will be located on State Game Lands near the Erie National Wildlife Refuge. Only one of these has been designated as a refuge to date. The others are propagation areas, closed to trespass during the nesting and brooding season but open to hunting during the migratory waterfowl season.

The establishment of inland refuges is needed to provide feeding and resting grounds to offset the losses incurred in the coastal areas due to residential and industrial encroachment. The establishment of the Erie National Wildlife Refuge will complement the recently approved Oak Orchard Refuge in New York, and will provide an additional stopping place for migratory waterfowl using the western part of the Atlantic Flyway.

Pennsylvania Ducks Really Go Places

Nearly 47,000 ducks, almost entirely mallards, have been reared, leg-banded and released in the Commonwealth by the Game Commission since the spring of 1951, when the agency began its waterfowl program.

By January 30 of this year the Commission had received band information on 5,911 or 12.6% of the 46,814 ducks liberated over the seven-year period on marshes, ponds and streams in the Keystone State. The largest number of bands, 5,209 was recovered from ducks shot in Pennsylvania.

Next came New York with 178. The Province of Ontario was third, with 139. The State of Ohio returned information on 60 of the birds; Maryland on 59; Michigan 55; Virginia 48; New Jersey 37; and Delaware 20. In all, records of the banded fowl came from 27 states and the Canadian provinces of Saskatchewan, Manitoba, and Quebec, as well as Ontario.

The duck taken farthest from its point of liberation was reported from Saskatchewan. In the United States the longest westward flight of the Pennsylvania birds was to the two Dakotas. Some of the ducks also traveled as far south as possible in this country, ending in the game bags of hunters in Florida.

The northward direction taken by the waterfowl is puzzling to many persons. The explanation is this: Apparently, as the birds develop wing strength in late summer an urge to see new places causes them to make a maiden voyage in whatever direction fancy chooses. Records prove however, that many of the liberated fowl that survive gunfire and other perils in the North and South, and during fall and spring flights between summer and winter homes, return to the Pennsylvania locality from which they departed.

Game News Gun Columnist Dies In Altoona Hospital

Edwin F. Shearer, who wrote gun columns for *GAME NEWS* since 1949, passed away in the Veterans Hospital at Altoona on February 14, 1958. He had been ill for four months and entered the hospital on January 24. Mr. Shearer was 63.

A sportsman who had roamed the wilds from Canada to the Florida Everglades, had a life-long interest in guns. He liked to recall that he owned ten guns by the time he was ten years old. He was three times on the International Small Bore team and held the world's record for eight years. He also claimed the co-title for the world's record for two-man team competition.

A graduate of Lock Haven schools, he attended college in Philadelphia until the outbreak of World War I when he enlisted in an ambulance company formed in Clinton County. He served 22 months in France. Ed was a leader in V.F.W. affairs and held an appointment as Aide-de-camp to the National Commander.

Since 1931 he and his wife had made their home at Farrandville. At one time he was a forester for the State Department of Forests & Waters. Always an enthusiastic rifleman, he won his first world championship in 1925 and at one time was connected with the Winchester Arms Company as an exhibition shooter.

Starting in 1949, Ed Shearer was a constant and faithful contributor to the pages of this magazine. His writings on guns always were aimed at answering questions for the average hunter. Ed was an enthusiastic hunter, himself, and was especially fond of seeking woodchuck, grouse, deer and wild turkey. It is with deep regret that we announce his passing to *GAME NEWS* readers, many of whom will join us in extending sincere sympathy to his wife and family.



YEAR'S CATCH of foxes is displayed by Milton Hoffman, of Weatherly. These 82 pelts were taken during 1957 on a trapline in Carbon and Luzerne counties.

LOW PRICES AND ADVERSE CONDITIONS CAUSE SMALLER FUR TAKE

In the concurrent muskrat and mink season which recently ended most areas of the state reported a fair to poor take of these animals. Reasons given for the decline in the harvest are: the present low price of fur; fewer trappers active; and undesirable trapping conditions.

In some localities the rats and minks were said to be above normally abundant. In other, migration of the furbearers from their former haunts because of low water due to the dry summer or fluctuating water levels and freezing during the season, which discouraged the trappers, were given as reasons for the decline in the harvest of the small, fur animals.

In the 1958 beaver season, which opened February 15, cold and snowy weather, thick ice and dangerous travel conditions in the northern counties, where the bulk of these large fur animals are found, drastically limited the catch. The beaver population has been reported generally as about as high or a little higher than last year. Again, the current low price offered for beaver skins has curtailed the furtakers' enthusiasm. Some of the more hardy trap-

pers were using snowshoes on 20 to 30 inch snow to reach localities where they wished to set traps. Power saws have come into use to cut through the 15 to 20 inch ice in order to set or tend traps. The season closed at noon, March 15.

Though lower fur prices prevail it should be noted that trappers and fur buyers still are doing a considerable business in this line. The law requires that fur dealers in Pennsylvania be licensed by the Game Commission and make an annual report of sales to the agency. In the winter season of 1956-57 raw furs bought primarily from Pennsylvania trappers by fur buyers in this state, reveal some interesting facts: 609,639 muskrats, \$554,346.52; 52,000 raccoons, \$56,041.56; 7,792 minks, \$55,864.70; 3,864 beavers, \$29,926.70; 9,896 skunks, \$8,340.12; 6,420 weasels, \$5,181.65; 6,103 opossums, \$923.08; 1,551 red foxes, \$213.95; and 1,108 gray foxes, \$127.65. The total of these sales was \$710,965.93, which is not nearly the amount the furs would have brought in years past but still is a sum to reckon with in the economy of the Commonwealth.

Pennsylvania Hunting License Sale At All Time High, Increased Interest In Outdoor Sport Follows U.S. Trend

More persons purchased Pennsylvania hunting licenses, both resident and nonresident, during the current license year which started September 1, 1957 than ever before in history. Preliminary figures showed that by early March the resident license sale was 918,387 and the nonresident sale was 39,376. The current hunting license year does not end until August 31.

The total number of hunting licenses issued so far—957,763—represents nearly 20,000 more than the number bought in the full 12 months of the 1956 license period. The preliminary 1957 figure is over 100,000 more than the final figure for the 1951 issue. None of these totals includes the antlerless deer or archers' deer license sale. The number of licenses sold for Pennsylvania's antlerless deer season in 1957 was 334,655. Licenses purchased by archers for their separate hunter choice deer season last October totalled 55,554.

The upswing in Pennsylvania last year was typical of the nation-wide

trend, according to figures just released by the U. S. Fish & Wildlife Service. The popularity of sport fishing and wild game hunting in the United States soared to new heights during fiscal year 1957 when a record total of 34,195,183 licenses was sold to devotees of these outdoor sports. This represents an increase of 1,031,352 over the previous high total recorded in fiscal year 1956. The 1957 total was divided between 19,276,767 for fishing and 14,918,416 for hunting. Total cost to hunters and anglers for all licenses, permits, tags, and stamps (not including the Federal "duck stamp") was \$90,617,039—an increase of \$829,145 over the previous year's total.

In the category of hunting licenses sales, the total of 14,918,416 was divided between 14,508,469 resident and 409,947 nonresidents. Pennsylvania had the greatest number of nonresident hunters—39,376.

Based upon the total number of paid license holders, the "big ten" States for 1956-57 and 1955-56 were:

HUNTING LICENSES

1956-57	1955-56
Michigan	1,250,004
New York	1,024,975
Pennsylvania	*957,763
Ohio	738,672
Indiana	674,312
California	665,875
Wisconsin	651,669
Illinois	556,215
Minnesota	552,917
Texas	412,961
Michigan	1,218,781
New York	975,551
Pennsylvania	938,064
Ohio	684,377
Indiana	680,460
California	632,351
Wisconsin	616,439
Illinois	528,963
Minnesota	525,141
Tennessee	461,598

* Preliminary figures subject to change by end of license year on August 31, 1958.

Grouse Grumblings and Turkey Tallies - 1957

By Glenn L. Bowers
Chief, Division of Research

WHAT happened to the grouse? That was a familiar question last October and November. For many hunters the 1957 grouse season was nothing to brag about. Brood counts and later summer and pre-season observations indicated a better season than was experienced.

Generally grouse were spotty. In some areas they were extremely wild throughout the season. Many times when flushed the birds were heard—not seen. There will certainly be better years than 1957 for grouse shooting!

Grouse hunters submitted wings and tail feathers for our sex and age study. These men were individually informed by card as to the sex and age of the specimens they submitted. Here we want to give the complete results of the survey.

In 1956 a wet, cold hatching season hurt production. Wings and tails in 1956 showed 59% old birds and only 41% young. While there was an improvement in 1957, things were not good. The 1957 wings and tails showed 43% old birds and 57% young. In years of good production young birds should make up 70 to 80% of the kill. This figure was approached in Centre and adjacent counties where about 70% were young birds. Production varied over the State and in Fayette and Somerset Counties only about half the birds were young. Lets hope the production in the central counties continues or improves, and spreads to other areas!

How about the sex ratios? The young birds showed a ratio of 126

males to 100 females. Among the old birds males were further in the majority—180 to 100. The all-age ratio was 145:100.

The usual numbers of red ruffs and silver tails were noted among the wings and tails submitted. A partial albino was bagged in Clinton County.

Bear and deer hunters and others who spent time in the grouse coverts following the season reported optimistically on grouse numbers. There's no doubt that where satisfactory cover exists, enough birds to provide a lot of fun will be found. Thanks again to those who submitted the grouse wings and tail feathers. We will look forward to a better season in 1958 and your continued cooperation.

Wow! Twenty-eight pound wild turkey toms—not guessed but on the scales. Two birds of this weight were recorded by Game Protectors while checking turkeys bagged during the 1957 season. Don't get anxious, over optimistic or too selective, hunters—there aren't many old toms of that size around. Only a few of the estimated 16,156 wild turkeys killed in the 1957 season weighed twenty or more pounds.

These weights and other data were obtained during the course of a turkey season survey. Information on the age and sex composition of the turkey kill was badly needed. These facts may become increasingly important, as interest in turkey hunting grows and hunting pressure rises, in the management of this much sought, highly prized trophy.

Before listing the various information obtained, it must be noted that a random sample of the turkey kill is difficult to obtain. It is only natural that because weights were requested, there was a tendency to weigh and record the larger birds. Also, because large birds are better "advertised," it is easier to learn of them and check them. In order to eliminate some bias, young birds obviously released just prior to the season were not included in the sample.

Many hunters will probably be surprised at the results of this survey. In both age groups—juveniles (hatched 1957) and adults, more hens than toms were killed. 57% of the young birds in the bag were hens, and 54% of the old birds killed were hens. (Sex ratios: young—75 males to 100 females; old—83 males to 100 females). The all age sex ratio of the kill was 79 males to 100 females. These ratios are further supported by reports from Game Protectors in districts of high turkey kill. These men report a post-season population top heavy with gobblers. This is not a healthy or desirable flock condition. Because one tom controls and mates with a harem of several to numerous hens, a breeding population favoring hens is satisfactory and desirable. We could safely harvest more turkeys in many areas if this additional kill was mostly gobblers. Perhaps turkey hunters should be more selective in making their kills. At any rate, further surveys of the turkey kill will be undertaken. Future management practices may hinge upon undesirable

changes in flock composition and related factors.

Getting back to the weights of some of the birds checked—actual weights were obtained on 181 turkeys, estimated weights on 193.

The very low weights recorded were for late hatched birds. These small turkeys weighed only slightly more than large cock pheasants. While to some sportsmen it would seem a shame to kill such a small turkey, harvesting these birds may be best for the flocks. Small birds such as these going into the winter may find the going rough. These small late hatched birds are in a stage demanding added nutrition for rapid growth. Deprived of this by the rigors of winter they may never attain the size of birds hatched at a more normal time.

There are sufficient big old toms sticking around for persistent or discriminating hunters. These wise old birds are toughest to bag. This survey indicates that toms, both young and old, are apparently more wary and more difficult to bag than hens. So if you really want a trophy, don't shoot 'til you see a tom with a beard that drags on the ground! Little information was offered on the length of beards but several toms had beards ten to eleven inches in length. And not to be outclassed was an old hen sporting an eight inch beard.

Our thanks to all those who cooperated in this survey. Don't let that turkey call gather dust. Keep practicing and maybe you'll fool a big tom for next Thanksgiving.

Turkey Weights 1957

	Numbers Checked		Weight Range Pounds		Average Weight Lbs. and Ozs.	
	Actual Wt.	Estimated Wt.	Actual	Estimated	Actual	Estimated
Juvenile Male	36	39	4½-14	3-13	10-1	8-13
Juvenile Female . .	36	63	4-10½	3-11	7-4	7-1
Adult Male	65	36	12-28	10-25	17	17
Adult Female	44	55	7½-16	6-15	11-1	11

Pennsylvania's Handicapped Children Need Your Help Through Easter Seals

By Herbert Walker

Director, Public Relations
Pa. Easter Seal Society

MAYBE he'll never let fly an arrow at a deer or a bear in a Pennsylvania woodland, or bring down a rabbit or a pheasant in smiling meadows, for getting about is a chore for many a boy whose crippling condition forces him to wear heavy braces, use crutches or even get about in a wheel chair.

He may never aim his .22 calibre rifle at a barking squirrel in the top of a tall tree. The joys of long hikes in the woodlands and mountains, or a hunting trip with boon companions in later years, will be denied him.

But at least he can enjoy archery and other sports in one of the four summer recreational residential camps conducted by the Pennsylvania Society for Crippled Children

and Adults, Inc., for the benefit and enjoyment of handicapped boys and girls.

As he stands, tense and expectant, holding bow and arrow, the target in the distance can, in imagination, become a fleet, bounding deer or a plodding bear—or even a wily rabbit. Most of these lads in summer camps—and not a few girls—become expert archers and enjoy the sport to the fullest extent.

Not all of the more than 11,000 handicapped boys and girls, helped last year by 52 local societies affiliated with the parent organization—the Easter Seal Society—can enjoy archery, of course, but they all deserve the help in rehabilitation that can be given them all year around through wise expenditure of funds obtained during the annual Easter Seal appeal. That appeal extends from March 6 through April 6.

There may a chill in the air, but there is warmth in the heart of many a handicapped boy and girl in Pennsylvania already planning ahead to the day when they will pack their braces and crutches as a part of their camping gear and head for one of the society's camps.

There they will enjoy camp-outs, cook-outs, hiking, baseball, fishing, archery, badminton, crafts, swimming and other forms of recreation and entertainment—all modified to meet the crippling conditions of the handicapped boy or girl. Weeks in the sunshine and fresh air send them back to their homes with happy memories and in better physical condition.





OUTDOOR FUN WITH A FUTURE



Wildlife Needs Good Soil

By Ted S. Pettit

GOOD fertile soil is as important to wildlife, as it is to us. We know that all our food, whether it be cereal, bread, eggs, milk or meat, has its origin in fertile soil. Our cotton and woolen clothing too can be traced to seeds that germinate in fertile soil. The wood in our homes and some of the materials used in plastics stem back to soil. Without fertile soil, our country would go the way of ancient civilizations that once stood on what we know now as deserts.

In the same way, wildlife—from fish to deer or bears—depends upon fertile soil for food, den or nest sites and protection from enemies and weather.

One of the best ways to prove this for yourself, is to start out with a trout, bass, pheasant, mink or deer and figure out what each one eats and where each one finds shelter. Then work back one more step, and another. In some cases, you may go back only two steps to soil, in other cases three or four. Let's start with a trout.

FOOD AND COVER on any farm are the keys to game abundance. This farm provides good conditions for wildlife.



Trout feed on insects, smaller fish and other aquatic animals. These insects or smaller fish may eat smaller animals or plant life. The plant life in the water exists on minerals in the water, or minerals in the soil on the bottom that washed off surrounding hillsides. If the soil on the watershed was not fertile and rich in minerals, the plant life in the water would not be there or would not be of a high enough quality to support small animals upon which trout feed. The man or the mink, heron or osprey that catch the trout, depend upon the fertile soil on the watershed.

More closely connected to fertile soil are those animals such as pheasants, rabbits or deer, that live directly on plants. Where soil is fertile, plant life is more luxuriant and animals find a large variety of food and more places to build nests or dens and more cover to shelter them from enemies or weather. But, the fox that may eat the pheasant or rabbit, or the raccoon that may raid the pheasant nest, are equally dependent

upon the soil that grew the plants that fed the animal that the fox or raccoon ate.

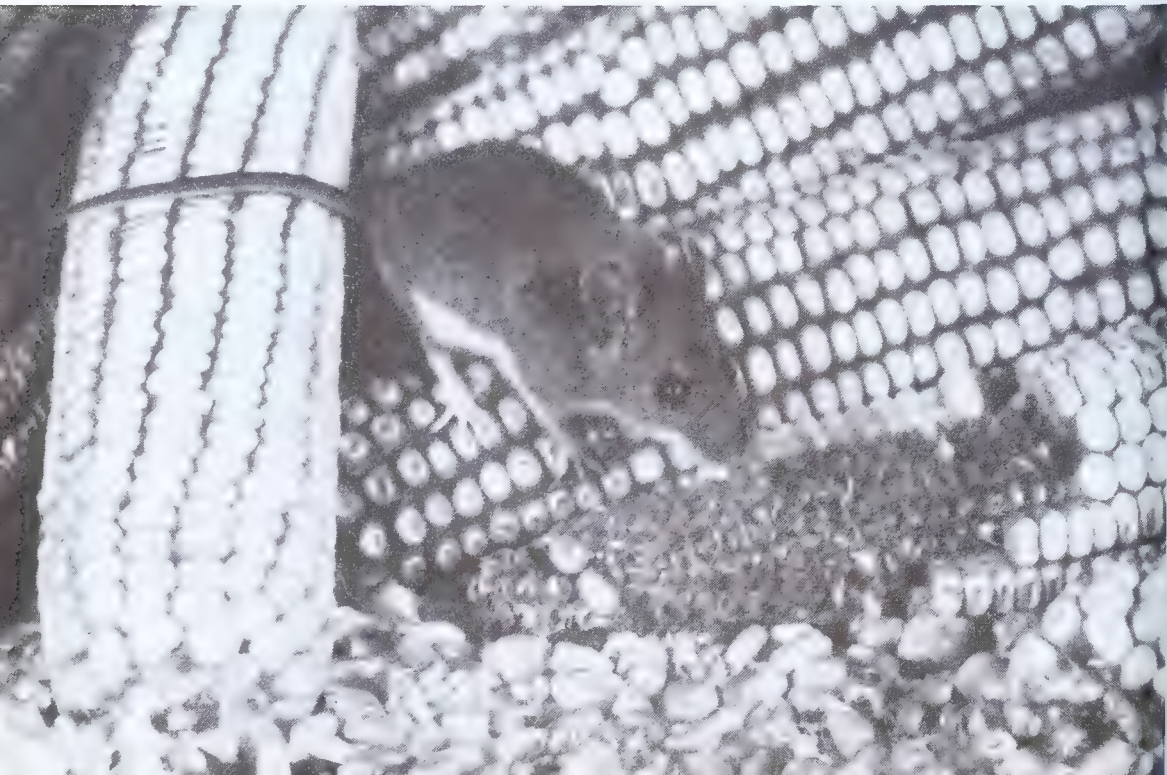
One of the most spectacular experiments that proved the importance of fertile soil to wildlife was carried out on two farms located within a few miles of each other. One farm was run down. Over-grazing on the pastures and the wrong kind of farming practices on the cultivated fields had resulted in soil erosion and the loss of minerals in the soil that was left.

On the other farm, good farm practices and the use of the right kind and amounts of fertilizer resulted in fertile soil and a much greater production of hay and other crops.

A group of wildlife biologists set mouse traps on the two farms to try to estimate the number of meadow mice living on each farm. On the run down farm, they estimated the population of mice to be less than fifty per acre. On the well managed farm, the estimate placed the mice population at more than 2000 per acre. Other trapping projects on farms

MOST ABUNDANT WILD ANIMAL on almost every farm is the meadow mouse. On a well managed farm they may number over 2000 per acre.

Photo by Leonard Lee Rue



where the soil was fertile have resulted in estimates of 5000 or more mice per acre.

Of course, these mice are not a desirable form of wildlife to have on a farm because of the damage they do to hay and farm crops. But, the results of the project—plus others like it—indicate fairly well that fertile soil will support more animals both domestic and wild, than run down farms where the soil has lost much of its fertility.

It is reasonably easy to prove this or yourself. It can be done in two ways. The first way is to buy some mouse traps and run a couple of trap lines on two areas—one where the soil seems to be in good shape and producing large yields of hay, alfalfa or other grain, and the other on an area where the soil has been depleted of its minerals and is not producing either good quantities or good quality hay.

Ordinary mouse traps will do the trick. Set them in runways in the grass, in fence rows or hedgerows and in field borders. For bait use a pasty mixture of water and oatmeal, water and cornmeal or even peanut butter. Set traps for a week and check them twice a day, resetting them. With a dozen traps in each area, you should see very soon the relative abundance of small mammals on the two contrasting areas.

But one suggestion: Drive a small stake in the ground and fasten the trap to it with strong cord or fine wire. Sometimes weasels or skunks or even snakes will follow the trap line to eat the mice and in the process, carry the trap off somewhere where you cannot find it.

The second way is to visit contrasting areas several times this spring and make a list of the wildlife species you see or a list of animal signs you find such as droppings, tracks, nests, dens, burrows, runways, or signs of feedings.



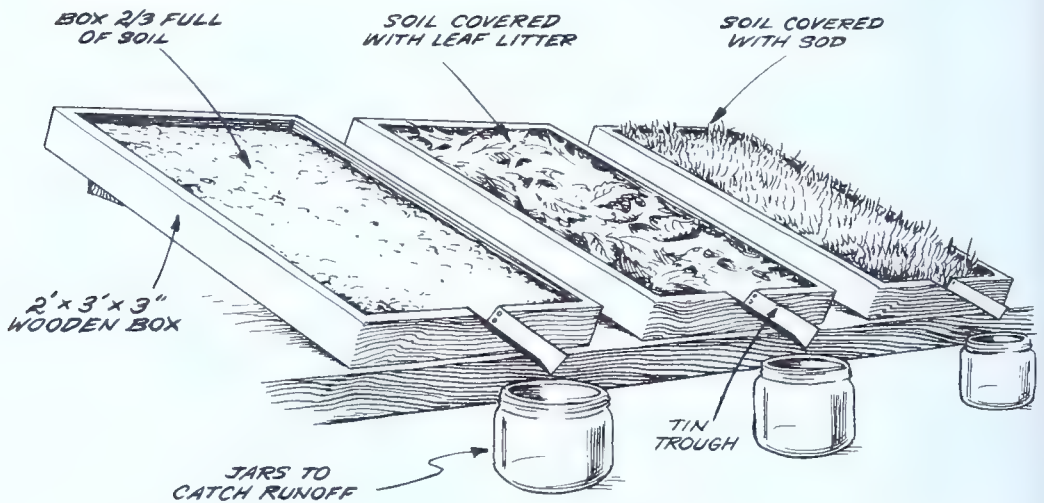
Photo by Donald S. Heintzelman

NATURE'S MOUSE TRAP is the red-tailed hawk shown above. One of many protected species of hawks in Pennsylvania, this valuable bird helps reduce over-populations of mice and rats on farmland.

Visit a well managed farm where there is no erosion, a place where there are hedgerows between cultivated fields, field borders planted with food plants and a well managed woodlot. Go there several times and keep an accurate record of what you see—birds, mammals and reptiles.

In between visits to a well managed farm, visit a farm where there has been a reasonable amount of erosion, where fields are cultivated right to the fence, where pastures are over-grazed and where the woodlots are grazed. Make a list of what you see here or the signs you find.

Compare the two lists and see what conclusions you come to as to whether or not wild animals depend upon fertile soil.



How Soil Is Lost

Soil is lost through wind or water carrying it away. But, something else happens first to make this possible. First the ground cover—either trees and shrubs or grasses—are removed, and without their protection the top will blow or wash. Soil protected by leaf litter, mulch or grass may wash or blow a little, but nowhere near as much as unprotected soil.

Here is a way to see that for yourself and you may want to use these demonstrations in school or at a Scout or 4H meeting to show others how it works. These demonstrations make good exhibits in many different kinds of meetings.

You will need three flat boxes about two feet wide, three feet long and three inches deep. You can use garden flats or cut down wooden crates such as fruit come in to your neighborhood grocery store or super market.

At one end of each box, right in the middle, cut a v-shaped notch about an inch deep. Use some tin cut from a tin can to make a two inch long trough and nail it in place.

Next, place enough top soil in each box to fill the boxes about two-thirds full. Bounce the box gently on the floor to settle the soil and put in some more to fill the box to within an inch of the top edge.

Next, get some sod and place it on top of the soil in one box. Get some leaf litter or duff from the forest floor and cover the soil in a second box. Leave the soil in the third unprotected.

Place the boxes on a table or bench and place a two inch block under the back end of each box. Place a large jar under the trough at the front of each box.

Measure out a gallon of water and pour it in a watering can (or make a sprinkler by punching holes in the bottom of a tin can). Sprinkle a gallon of water slowly and evenly on the box of unprotected soil. Watch what happens.

Sprinkle a gallon on each of the other boxes and watch what happens.

Compare the run-off in the three jars as to color and quantity. Let the water in the jar settle for a couple of hours and compare the amount of silt on the bottom.

This demonstration shows why soil washes and is lost. It also shows why streams and rivers are muddy after a rain. Save these jars of water and soil.

After the three boxes have dried out—in a couple of days or so—here is another project to try. You will need an electric fan—the larger the better.

This time, place the boxes flat on a table or bench. Next, take three pieces of wrapping paper or a board about 12" by 24" and cover them with shellac. While the shellac is still "tacky," hold one in front of the box covered with sod and hold the other behind the box. Turn on the fan for thirty seconds. Lay the paper or board aside. Take another piece of shellac covered paper or board and hold it in front of the box covered with leaf litter. Place the fan behind that box and turn it on. Lay the paper or board aside.

Do the same thing with the third box of unprotected soil.

Compare the three pieces of shellac covered paper or boards and see which has the most grains of soil stuck to the shellac.

This proves why and how soil is lost through wind action.

For a third project, lift off the leaf litter from the second box and using a spoon or trowel, make a dozen or so inch deep furrows in the soil across the width of the box.

Using the third box, make some inch deep furrows the long way of the box.

Tip the back end of the boxes up

two inches by placing blocks under the end. Place a large jar under the trough.

Next, sprinkle a quart or two of water on each of the three boxes. Watch what happens.

Compare the amount of water and silt with the jars used in the first experiment.

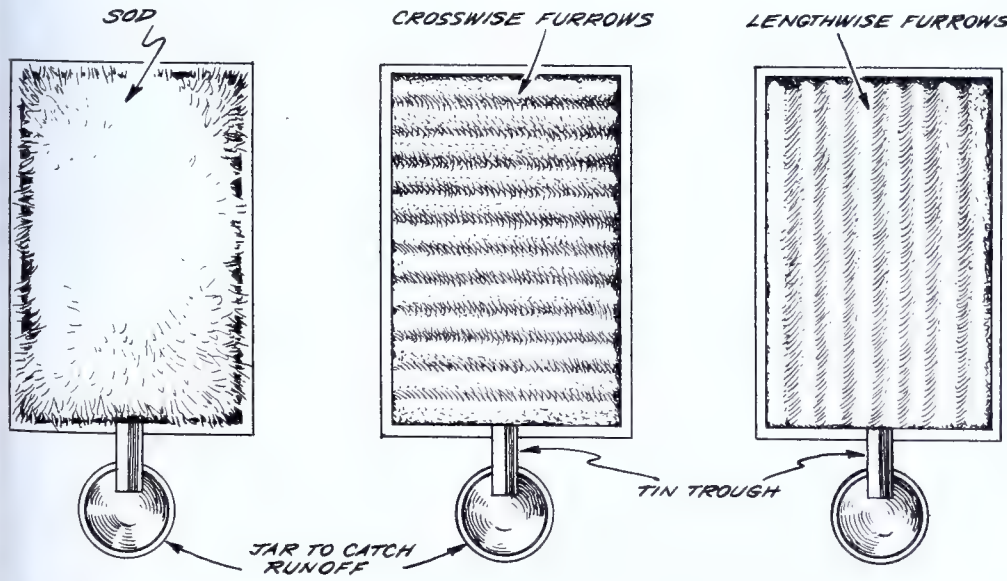
This project proves why up and down hill plowing helps to speed up soil loss and why plowing on the contour helps to keep soil on the land and out of streams, rivers, and lakes.

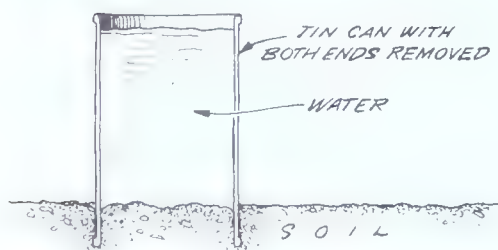
But, soil can be moved around by rain on perfectly flat land; it does not require a hillside and steep slope to have erosion.

You can prove it by using the box in which the soil is protected by sod and the box where the soil is not protected.

Place these boxes in the center of large pieces of wrapping paper or several sheets of newspaper spread out on the floor.

Sprinkle some water from two or three feet high on box number three—that in which the soil is not protected. What happens? Use a yardstick to measure how far the soil splashed. Try it on the box covered





DETERMINING ABILITY OF DIFFERENT
SOILS TO ABSORB WATER

with sod and compare results. This is called splash erosion and while it may not cause gullies and be obvious to the eye, it is also a way in which the productivity of soil is destroyed—which in turn is harmful to wildlife, since wildlife depends upon soil for food and shelter.

Another way in which soil is harmed so that plants will not grow is through "impacting" by people or domestic animals. You may see proof of this almost anywhere, but most easily along sidewalks or in school yards. You will see patches of soil where people have walked over and over again, wearing off the grass and packing down the soil so that the surface is hard and water cannot soak in. When it rains, puddles form in these places.

The same thing happens in woodlots where cattle graze. The soil becomes packed solid and air and water cannot get through to supply shrubs and trees with moisture and water dissolved minerals they need. In a relatively short period of time there is no ground cover for wildlife and no food. Large trees may survive and produce a few acorns for squirrels, but even these big trees suffer in a grazed woodlot.

There is a good way to prove this for yourself. Find a place either a school yard or a grazed woodlot, where the soil is packed down. Take a tin can with both ends removed and work it down an inch or so in the

soil. Fill it with water and time it to see how long it takes to soak in, if it does. After half a hour, if it hasn't soaked in, remove the can and take it to a place where the soil is easily worked, either a well cared for lawn or a garden. Repeat the experiment there and see how long it takes water to soak in.

This proves that soil that is managed properly will permit water to soak in so that plants may use it to grow and provide food for you and for wildlife.

Erosion Control on the Land

These projects are models or miniatures that show how soil is lost from the land, or how it loses its fertility and ability to produce food and cover for wildlife.

But more important than knowing "why or how," is doing something about it. It has been said that about 80 per cent of all small game—pheasants, rabbits, quail or squirrels—is produced on farmland. What that means is plain to see—most hunting in the future depends upon the kind of farming practices that protect soil and increase its fertility.

Our fun in the future depend upon what we do today. For if hedge growers, food plots, brush piles, woodlot management, small marshes and other wildlife management practices do not produce more wildlife overnight, they may take years. We all have a stake today in soil conservation, both as it is important to us whether or not we are sportsmen and doubly so if we like to hunt and fish.





EGG-SHAPED TRAP BED about 12 inches long should be excavated with a regular scratching tool. It should be about 7 inches wide, 3 inches deep at point indicated by tool.

How To Make The Dirt Hole Set

By Larry J. Kopp

(Photos by the Author)

ALTHOUGH the dirt hole fox set may be well understood by many of you, I am including it in my series of illustrated trapping columns for the benefit of new GAME NEWS readers—and, of course, for those of you who may still find it difficult to construct.

The accompanying photographs are more or less self-explanatory, but I would like to call your attention to a few points which might not be obvious: Notice, for instance, that the pack-basket should not be moved from one place to another while making the set. Set it down at a spot where it will not interfere with your work, then leave it there until the job is completed.

Another thing to remember: Lean your various tools against the pack-basket or lay them on the sifter when not in use. Avoid dropping them haphazardly upon the ground—unless, of course, you wear rubberized gloves at all times when handling them.

In general, don't just look at the illustrations—study them! Pay special attention to the picture which shows how to dig the bait hole—observe the angle of the trowel, then determine to duplicate it when making a fox set. Take a second, or even a third look at the photograph which shows the trap set in place. Note the relationship between the trap and bait hole.



BAIT HOLE at least six inches deep and two inches wide should be dug on a forty-five degree angle. The hole should be made at the extreme point of the trap bed. It is supposed to imitate the hole naturally dug by a fox in burying some choice bit of meat or other food.



SMALL PIECE of bait is dropped into the bait hole with the aid of a small twig. Good bait can be made from woodchuck. Many trappers still use hog lard cracklings. Bait should be about the size of a walnut. After placing bait in hole, use the trowel to smooth out any marks in the dirt you may have made.



ANCHOR THE TRAP by driving a stake either wooden or steel, in the center of the excavation. Stake should be driven down even with or slightly below the center of the trap bed. Allow only about ten inches of chain from this stake to the trap. Use rubber or canvas gloves in handling the trap and trap cover.



CAREFULLY SET TRAP directly in front of the bait hole. Use your trowel and work soil around the trap even with the jaws. If you want to use a pan cover, drop it now into the proper position. Then sift dirt over the trap, using your trowel to "level off." Be sure that no high spots remain, especially over the trap pan.



REPLACE ALL TOOLS in the pack-basket. Finish the set by placing several drops of fox lure on the edge of the bait hole. Finally, sprinkle a generous amount of good fox urine around the bait hole and over the trap. When you leave, use a stick or weed and remove any footprints that may be visible at the set.

PENNSYLVANIA BEAR GROUP IN NATIONAL MUSEUM

A photo of bears in a habitat group at the United States National Museum, which is under the direction of the Smithsonian Institute, appears in the 1957 annual report of the Museum.

The accompanying description reads: "Mother and twin cubs of the eastern black bear, shown in the early spring soon after leaving their den in the Allegheny Mountains, on Tonoloway Creek, Fulton County, Pennsylvania. Mixed forest of conifers and hardwoods, with shrubby undergrowth of rhododendron, willow and hazel provides typical habitat. Bears presented by the Pennsylvania Game Commission."

SHADES OF THE GOOD OLD DAYS

The following is extracted from an item that appeared under the above title in a February broadcast by the *New Mexico Department of Game and Fish*:

"A general hunting license bearing a 1919 date has just turned up in the Department. Way back then, when a general hunting license cost \$2.25, a shave or a haircut set you back two bits. Today you have to fork out \$6.50 for a general hunting license and your haircut costs you \$1.50. The 5 cent loaf of bread now costs 25 cents. In short, the price of the license has gone up by no means in proportion to the general cost of living. What's more the license now buys a heck of a lot more hunting than it did in 1919."

Commenting on the longer seasons enjoyed in late years, as well as the additional kinds of game to be hunted, the *New Mexico* release ends with: "Slip this item in your desk drawer and look at it the next time the Legislature ups the license fee. It should make you feel better about paying an increase."



Photo by Hal Harrison

Club Tournaments

By Tom Forbes

ON every field course the havoc created by the past winter's heavy snows and high winds is distressingly evident. Covers have been ripped from targets and water soaked bales of straw lean askew. Wires are broken, bracing has been loosened by frost action, and pieces of discarded target faces litter the ground in the vicinity of the targets. Shooting pegs are missing and the lettering on signs has been obliterated by the weather. In short the entire layout has to be rehabilitated.

Club members are fully aware of the work that will be required to place the course in condition for the first open tournament. Hardy members of the club who have shot the

course during the winter months have discussed the subject at the regular monthly meetings. Numerous schemes have been proposed to apportion the work load so that it will fall equitably on all the members. A work day is set and the members notified. The field captain is on hand and assigns tasks to the members as they report for work. Clubs may choose to assign the work on specific targets to designated groups allowing them to do the work at any time they are able to spare a few hours stipulating only that the work must be completed by a certain date. Whatever the method your club and mine finds the tournament date near and plenty of work remains to be done before the course can be shot. Volunteers for the work party fail to report. Material for new targets has been promised but delivery is delayed. Rainy weather cancels a scheduled work day. Finally a few, working long hours at every opportunity complete the work the



evening before the day of the first open tournament.

What are the ingredients that make a successful club? First: What is a successful club? Such a club will be one that plans its schedule of activities so that the entire membership of the club will enjoy participation. The percentage of Expert A's in any club is small compared with the total membership and in a well run club the novice bowman is given as much consideration as the experts when tournaments are planned. The average archer joins with a group of like minded individuals to enjoy the sport of archery. He likes the informal club shoots where entire family groups regardless of their skill can participate. A place for small fry to play, a picnic table and an outdoor fire place where the family can enjoy a meal attract members to any club and insure their continued membership.

Many clubs place too much emphasis on the open tournament. Leagues are formed and open shoots scheduled for every Sunday. Activi-

ties which should be planned for the home clubs are neglected or given only secondary consideration. Only a small proportion of the club membership regularly attend these Federation or League shoots and the only time these members shoot their home course is the day a League shoot is scheduled on their home grounds. Although few in numbers this group is always articulate and frequently is completely in control of the policies and management of the local club.

The trend to bigger and bigger shoots has apparently reached its peak. Except to a few hardy mountain climbers, what appeal can there be to an invitation to attend a 56 target field shoot? If archery is intended as a test of endurance or a survival of the fittest, this grind certainly separates the men from the boys. Except to determine a State Championship, when two days are set aside for the shoot, there is little or no reason for scheduling such a tournament. Neither can a shoot be termed a success if it attracts a large

FRIENDLY COMPETITION among all-members is common in all successful archery clubs. With all families competing or taking part in the shoot, the true fun in archery becomes the rule rather than the exception.



number of shooters. When five and six archers have to be assigned to one target and progress over the course is agonizingly slow, few care to repeat the experiment. The result is that the popular 28 target field round no longer draws the crowd of shooters it formerly did. The avid trophy seeker will still turn out to these open shoots but the average bowman who is the backbone of every archery club stays away. If the local club fails to plan club activities in which he can participate he gets in the habit of staying away from the club and the next year fails to renew his membership.

Friendly intra-club competition among all the members is common in all successful archery clubs. The membership and their officers know that club activities must be geared to a level at which all may participate and enjoy the sport of archery. Since classification is based on the 28 target field round it is the favorite of most field archers. Does your club keep a strict record of scores and accurately classify the archers in your club? An archer earns his classification and is justly proud of it.

To sharpen completion within a class and among all shooters, club handicaps should be determined for each archer and club handicap shoots held at intervals. Every member will be interested and will be on the course doing his best to take top prize for the day.

Too often club members fall into the habit of shooting the course with those in their own class and of comparative ability. One target will be composed of Experts and another made up solely of novices. A novice archer gains very little knowledge shooting with a group of novices. Each of us know that advice of a skilled archer is necessary if we are to show any marked improvement in the sport. To overcome this difficulty schedule club team shoots in which each team is made up of four archers each one of whom holds a

different classification. The expert should be the captain of each team and his challenge is to have his team shoot the winning team score. To do this he will show the novice how to improve his score and by example and advice improve the shooting technique of his team. The expert will know the satisfaction that comes from coaching a team to victory and every member of the team will profit from the shoot.

A member who knows that his club is interested in him as an individual is interested in the welfare of the whole club. When members know that club activities are planned to appeal to the novice and archer classes as well as to the bowman and experts, then course maintenance becomes the work of many hands and is quickly performed.

One successful club, whose membership has grown larger each year now owns the property on which its field course is located. The members have erected a club house on this property. Club shoots make up a major portion of this club's shoot. At the annual banquet trophies are awarded in each class. Each trophy is engraved with the name of the winner and the class. In addition a special award is made to the archer who has shown the most improvement during the year. This award is highly prized and encourages beginners to enter into competitive shooting. The odds are that the winner at the end of the season was a novice when he entered the competition. This was true of the winner of this year's award. During the season he had advanced from novice to expert. Eight of the club members were recipients of Big Game Trophies awarded by the club. This is about three times the success rate on a state wide basis. Which brings us to the conclusion that the successful club is administered for the benefit of all its members and that intra-club activities provide the best possible means of enjoying the sport.

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MAY, 1958

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TEN CENTS





THE STORY BEHIND THE COVER

SAY what you will about them, there's no denying the fact that foxes make devoted parents. A mated pair have no time for others of their kind and they show the

same loyal devotion to their off-spring.

By mid-May the scene so authentically portrayed by Dr. Poole on this month's front cover is taking place in the wild throughout Pennsylvania. The female fox gave birth to the litter of pups late in February or early in March. She had mated last January and there had followed a gestation period of 51 days. Her den had been carefully selected, its location taking into consideration a sufficient supply of food within hunting distance. Fox dens are usually made from woodchuck burrows, the foxes merely enlarging and adapting the burrow to their needs. In addition to the main entrance there are one or two escape exits.

Just prior to the birth of the litter and for about a month afterwards, the fox father is not permitted to enter the den. He remains faithful to his spouse, however, and regularly brings her food, stuffing the prey into the entrance hole and then retiring to a safe distance. But by mid-May the young pups are beginning to emerge from their underground nursery and they meet their father for the first time. Now both parents range widely in search of food for themselves but more especially for the young. The litter of four to nine pups is kept constantly supplied with meat. Pheasants, grouse (in woodland areas), muskrats, rabbits, domestic chickens and ducks, woodchucks, young crows that have fallen from their nest—all these are regular items on the bill of fare. The parents may hunt a mile or more from the den and they show a decided preference for larger prey in order to make the effort worthwhile.

In a few weeks the fox pups get their first lessons in hunting. Initially, the male will bring food directly to the den entrance but as the young grow, he starts dropping their meals further and further from the den. Thus they learn the rudiments of hunting and soon are ready to make their first "live hunt" under the tutelage of the vixen. By late summer the family has left the den but they still stay fairly close together or at least occupy the same hunting grounds.

The homelife of the red fox is an ideal seldom attained among wild creatures. It shows expert coordination and a cunning system of survival. How they live and what they eat is always a cause for difference among human opinion. As far as the foxes are concerned, however, the fact is that they are just doing what comes naturally. It is also interesting to note that foxes apparently can outwit their human and natural enemies in the process.

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Editorial . . .

To Make A Safe Sport More Safe

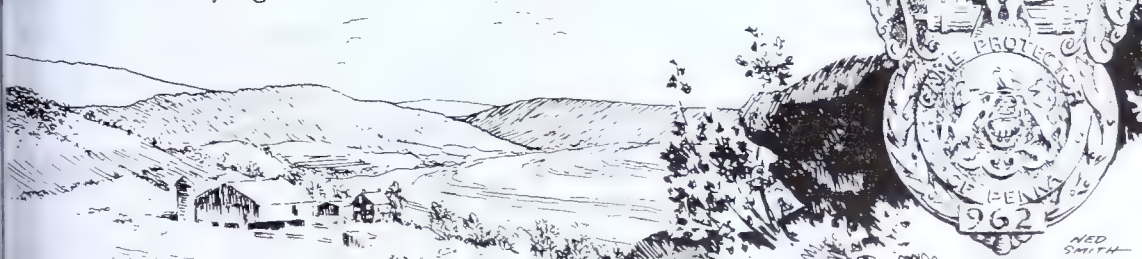
SAFETY is no accident. It doesn't happen suddenly nor does it result from some "crash program." It takes time to be safe—usually a lifetime.

A safe hunter is not born—he or she is made. And the only way to make a person safety conscious is to give him careful training, not only in the proper use and care of firearms but also in the conditioning of the physical and mental reflexes that terminate in the finger around the trigger. The process is continuous and it is most effective when such training is started early in life. Habits that are formed in the first few days of handling a gun stand a much better chance of becoming permanent. No law nor threat of punishment can teach any person—man, woman or child—an operating skill and ability unless the correct way has first been shown, demonstrated and practiced.

The answer, therefore, to making Pennsylvania's million hunters and countless other shooters completely safe is found in education. For many years your Game Commission and its field officers have advanced hunting and firearms safety at every opportunity. Every Game Protector at one time or another has taken part in lectures, demonstrations and programs designed to teach the correct ways of handling firearms. That 1957 was one of the safest hunting years on record may be some measure of success. But the job of teaching old and new shooters the safety precautions they must follow is not now ended. Rather, it is but a beginning.

Next month a selected group of Game Protectors and staff officers will take a special course to learn new techniques in teaching firearms safety. This hunter safety course will be conducted by the National Rifle Association at the Commission's training school. The basic aim is to better enable these men to show others how to teach firearms safety. They will become "teachers of teachers" so that an expertly trained army of qualified instructors may expand across the Commonwealth. An ever increasing number of persons can then be shown the right way to hunt and the safe way to handle sporting arms and ammunition.

This is a forward step in the right direction. The end result should and will be that a comparatively safe sport and healthy recreation—in the field and on the range—will be made more safe and satisfying.





WALKIN' SHOES

By NED SMITH

Wild Flowers Of The May Woods

By Ned Smith

1. Do orchids grow wild in Pennsylvania?
2. The wake-robin is noted for its pleasing fragrance. True or false?
3. The wild columbine is found in a variety of colors. True or false?
4. The wild geranium is one of our most common woodland flowers. True or false?
5. The moccasin flower is named for the poisonous water moccasin. True or false?
6. What wild flower is named for an article of clothing from the Netherlands?
7. What wild flower bears a fancied resemblance to a preacher?
8. Low, swampy places are favored habitat of the wild columbine. True or false?
9. The showy orchis is one of our most brilliantly colored spring flowers. True or false?
10. The Virginia bluebell is found chiefly in the lowlands. True or false?

(Answers to the above questions will be found at the end of this article).

THE appearance of an article on wild flowers in a he-man's magazine might cause some readers to wonder what geraniums and violets have to do with shooting grouse or hooking trout. As a matter of fact, they have no bearing whatever on hunting or angling success. They do, however, have a great deal to do with the outdoorsman's enjoyment of his day afield. Once he learns to watch for, identify, and enjoy the colorful wild plants he meets along the way he'll care a heck of a lot less whether or not his creel or game pocket is bulging.

Obviously space will not permit the inclusion of more than a small fraction of the several hundred species found in Pennsylvania, so we've limited the choice to a dozen beautiful woodland species likely to be seen in May by the trout fisherman, hiker, or picnicker. Many more deserve mention, but the discovery and identification of any of these is guaranteed to make even a fishless day a memorable one.

1. VIRGINIA BLUEBELL (*Mer-*

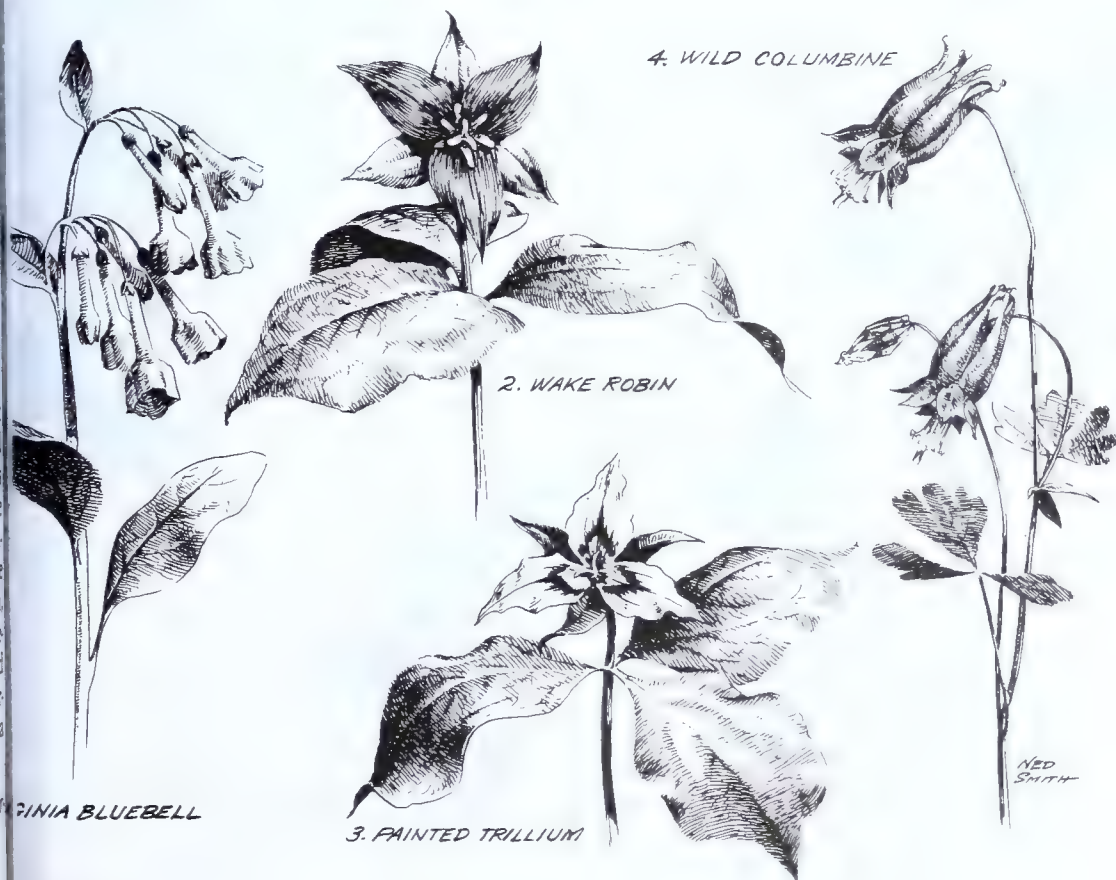
tensia virginica). These delicately-hued flowers love the rich, wooded bottomlands along some of our streams—damp, shady places where high waters occasionally spread a thin layer of sand and silt around their feet. The drooping clusters of trumpet-shaped flowers are light blue in color, while those still in bud are pink. The smooth, oval leaves are quite attractive in their own right. I've seen these flowers along many of our streams, including a dozen spots close by the Susquehanna, but the most profuse growth it's been my good fortune to discover was along a certain "trouty" stretch of the Tuscarora Creek.

2. WAKE-ROBIN (*Trillium erectum*). Luckily for the budding botanist the wake-robin is a flower of generous proportions and need not be examined at extremely close range, for the odor it exudes is more suggestive of fox bait than of flowers. In spite of its smell, it is a handsome

plant—ringed with a whorl of three leaves, and topped with a three-petalled blossom of rich maroon or purple.

3. PAINTED TRILLIUM (*Trillium undulatum*). Whenever anyone mentions painted trilliums I recall again a woodland path that rims a particularly picturesque pool on White Deer Creek. In May the painted trilliums line up along the trail as though eager for an admiring glance from the passing angler. And it would be a callous individual, indeed, who could ignore their plea. Smaller than its close relative, the wake-robin, this flower has three wavy white petals, each adorned with a v-shaped mark of crimson.

4. WILD COLUMBINE (*Aquilegia canadensis*). Few wild flowers thrive in the stony places preferred by the columbine. It blooms in equal profusion along boulder strewn northern streams and on precipitous mountain cliffs of almost solid rock. The



long-spurred bright red flowers with yellow centers hang from curved, wiry stems. The leaves are small, divided into several lobed leaflets.

5. JACK-IN-THE-PULPIT (*Arisaema triphyllum*). The true flowers of this plant are tiny, inconspicuous things hidden by the "pulpit." The latter is a light green spathe streaked with darker green or dark purple that shelters the "little preacher." The berries which ripen in the fall are a brilliant, eye-catching red. Jack-in-the-pulpit grows in a variety of places, but does best on a diet of shade and moisture. The most robust plant I've ever seen was a 44" specimen springing from a low spot along Penn's Creek above Cherry Run.

6. MOCCASIN FLOWER (*Cypripedium acaule*). This is perhaps our best known native orchid. It is a stately plant, sending its graceful stem from the fork of its twin, parallel-veined leaves to a height of ten to sixteen inches. The most conspicuous

feature of the flower is its large, inflated pink lip, strongly veined with darker pink. The moccasin flower seems to grow most commonly beneath evergreens, but is often found in deciduous forests as well.

7. YELLOW LADY'S SLIPPER (*Cypripedium pubescens*). The discovery of this elegant orchid is always a pleasant surprise. The large, pouched lip is yellow in color, the curiously twisted petals are brown. The downy leaves are arranged alternately along the stem, rather than basally, as in the case of the moccasin flower. A close relative, the smaller yellow lady's slipper is, as the name implies, a smaller flower less than an inch in length, and of a deeper, more intense yellow.

8. WILD GERANIUM (*Geranium maculatum*). Unlike most of the species herein described, the wild geranium disdains deep shade, preferring instead to grow along woods roads, paths, and streams where there



5.

JACK-IN-THE-PULPIT

(RIGHT) -

7. YELLOW LADY'S SLIPPER

8. WILD GERANIUM

6. MOCCASIN FLOWER



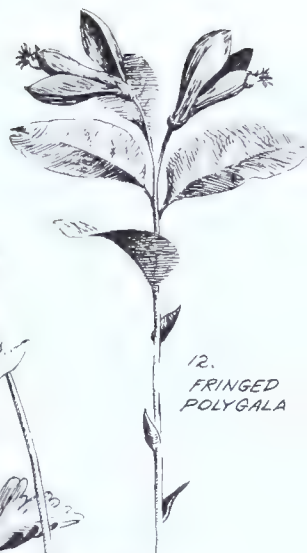
9. SHOWY ORCHIS



10. WILD GINGER



11. DUTCHMAN'S BREECHES



12. FRINGED
POLYGALA

is more sunlight than shadow. Its lilac-pink flowers are finely veined with a darker shade, and the leaves are deeply lobed. Of the entire group covered by this article the wild geranium is probably the most common.

9. SHOWY ORCHIS (*Orchis spectabilis*). How this tastefully yet modestly colored native orchid ever came to be called "showy" is more than I can imagine. Its small spike of white-lipped lilac flowers springing from the shiny basal leaves is much too easily overlooked, tucked away as it often is among the rocks and ferns of shady places beneath the hemlocks. Among its unusual features is its four- or five-sided stem.

10. WILD GINGER (*Asarum canadense*). Until you've cultivated an eye for wild flowers you'll probably overlook this inconspicuous plant with its odd, partially hidden flower. It can be distinguished by its pair of heart-shaped leaves growing from two

hairy, basally-joined stems. Attached to the fork of the stems you will find the flower, a purplish brown bell, the edge of which is turned back and divided into three pointed "petals."

11. DUTCHMAN'S BREECHES (*Dicentra cucullaria*). The name's a good one, for this plant's inflated ivory and yellow flowers look for all the world like tiny, inverted Hans Brinker type trousers. I have a feeling that the singularly descriptive name is responsible for this flower's popularity. The finely cut foliage is among the prettiest, and a shady mountainside carpeted with the feathery green and ivory blooms of the dutchman's breeches is a sight to behold. A similar plant, squirrel corn, has heart-shaped flowers.

12. FRINGED PLOYGALA (*Polygala paucifolia*). This flower is not for those who can appreciate only the huge or the gaudy. It is a tiny thing, seldom attaining a height of more

than five inches. But what an exquisitely wrought little beauty it is. The flower itself consists of a rose-purple tube set between two purple wing-like sepals and tipped with a yellow fringe, the whole thing suggestive of an exquisitely fashioned miniature orchid. The fringed polygala is usually found beneath the sheltering boughs of venerable hemlock trees.

Answers

1. Yes. In fact, three native orchids are described in this article.
2. False. The wake-robin's other name is "wet-dog trillium". Convinced?

3. False. Unlike the cultivated columbine the wild variety is found only in red with a yellow center.
4. True.
5. False. It is so-called from its resemblance to an Indian moccasin.
6. The dutchman's breeches.
7. The Jack-in-the-pulpit.
8. False. The wild columbine likes well-drained, rocky ground.
9. False. The combination of lilac and white is much more subdued than the name of the flower would indicate.
10. True.

"THE WONDER OF WATER"

A new booklet, in comic-book form, "The Wonder of Water," does an excellent job in drawing together for young readers facts about the origin of water, its vital importance to humans, and its method of conservation, the Wildlife Management Institute reports.

The 15-page publication, which should be of great help in assisting youngsters in understanding our country's overall water problem, is an educational project of the Soil Conservation Society of America, 838 Fifth Avenue, Des Moines 14, Iowa. Special discounts are available on quantity orders.

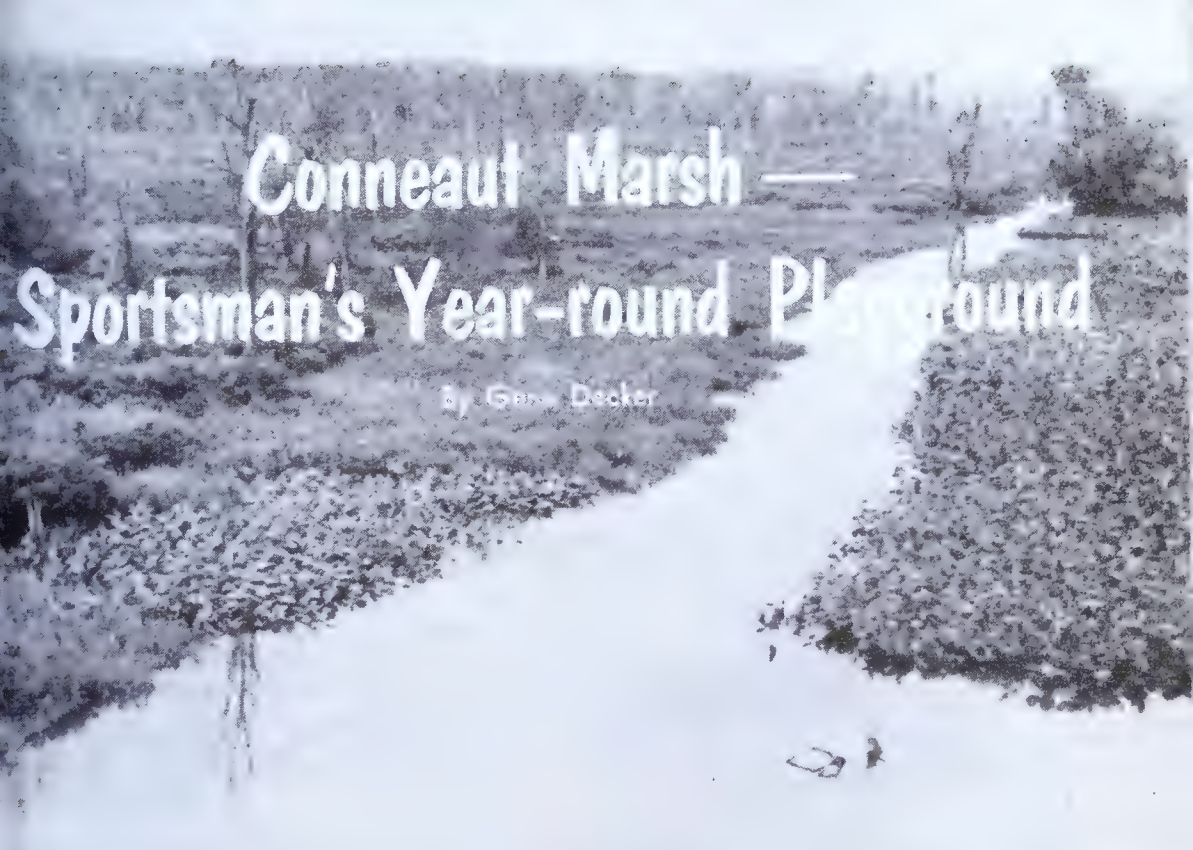
TWO NEW BOOKLETS PORTRAY PENNSYLVANIA HISTORY

"Highlighting Pennsylvania's History (Part 2)" and "Pennsylvania—The Keystone State," two new 64-page booklets, have recently been issued by Pennsylvania Publications, A. H. Carstens, Director, Cresco, Pa. The first title contains additional text and illustrations to that contained in Part 1, this booklet recounting the story of Washington's Crossing and Valley Forge, the story of travel, the services of Benjamin Franklin, the life of James Buchanan and other historical figures. It includes the story of the Pennsylvania State Police and lists State Parks, shrines administered by the Pennsylvania Historical and Museum Commission. "Our Pennsylvania" has a more diversified coverage of history, including a two-page story on a Pennsylvania ghost town. Both booklets are available from the publisher at a cost of fifty cents each.

HOW IS YOUR SHOOTIN' EYE?

Ever wonder if the "misses" you've made while hunting might have something to do with your eyes? A few years ago "Sports Afield" magazine published an article on the relationships between eyesight and hunting. It won national acclaim and was granted an award from the National Safety Council.

Dr. Robert C. Phillips, president of the Pennsylvania Optometric Association, recently announced that reprints of the article "That Shootin' Eye" are available on request. Interested persons should write: Pennsylvania Optometric Association, 229 State Street, Harrisburg, Pa.



Conneaut Marsh — Sportsman's Year-round Playground

By Gene Decker

UP Crawford County way, in northwestern Pennsylvania, there is one of the largest natural wetland areas in the state, the Conneaut Marsh. Averaging about a half mile in width, the marsh extends along the outlet from Conneaut Lake for about six miles. It lies in one of the typical flat-bottomed valleys found in the region which were formed by glacial deposits when the late ice-age covered this corner of the state.

The word "Conneaut" was taken from the Iroquois Indian "Konn Knu Yaut" which meant "Melted Snow Water Lake." This section of Pennsylvania was a favorite hunting ground for various Indian tribes, but the Senecas were the permanent residents.

White men settled the area in the late 1700's and soon altered the appearance of Conneaut Marsh. First, in 1829, they built a canal along the northern edge of the marsh to connect the town of Conneaut Lake with the Erie Extension canal at French Creek. Until the abandonment of the canal in 1872, the overflow from the lake went down through the canal

instead of through the marsh. Undoubtedly the water levels in the marsh were lowered considerably and many former wet areas were without water in dry seasons.

In the late 1860's, with funds assessed from local farmers, a ditch was dug through the marsh with a steam dredge creating a channel eight feet deep and sixteen feet wide, which, with the aid of side ditches, drained most of the low lying areas. This land soon dried out and was considered the best agricultural land in the county. The portions not used for farming were invaded by shrubs and later trees began to grow on what had been treeless sites.

Since the drainage in the last century, many portions of the channel have gradually filled in with vegetation and with silt from the surrounding farmland. This and the construction of a railroad and several highway roadbeds across the marsh have forced the water back into many of the low sections. Beaver also have been instrumental in flooding vast stretches by building several dams on the channel. The only signs of the

drainage period remaining are the straight channel with a few side ditches and the dead trunks of the trees which were killed by the re-flooding.

Today much of Conneaut Marsh is again wet and many forms of wildlife have benefited by the return of the natural marsh. Extensive communities of excellent waterfowl food producing plants like dotted smartweed, arrowhead and rice cut-grass, feed thousands of migratory waterfowl every year. Numerous other species also find food and shelter in the cattail, bur-reed, brush and woodland areas on or bordering the marsh. Most of the Conneaut Marsh with adjoining fields and woodlands has been purchased by the Pennsylvania Game Commission and together form State Game Lands #213.

Conneaut Marsh offers a natural setting for observing a variety of wildlife and it is a favorite spot for many of Pennsylvania's outdoor lovers. The activities of the birds and animals provide many enjoyable hours of recreation for the natural-

ist, bird-watcher, photographer and sportsman. Since the habits of the wildlife on the marsh are largely dependent upon the season, let us now have a look at Conneaut Marsh during the four seasons.

Spring

Spring is the period of greatest activity on Conneaut Marsh. Winter is over here when the ice first begins to break up on the larger pools and along the channel. This usually occurs in early March and is the signal for the arrival of the vanguard of the northern migration of waterfowl. Mallards and black ducks are the first to show up on the ponds still partially ice covered. Next, a few pairs of wood ducks and green-winged teal arrive, flying along the channel where little flocks of ringneck ducks and scaup are swimming about.

With the coming of April, the migration is in high gear. The flooded rice cut-grass fields which border much of the upper marsh are the favorite stop-over places for the large flocks of pintails, which frequently

PIED-BILLED GREBE is not a common species at Conneaut but it is certainly one of the more interesting birds. Many waterfowl and shore birds nest here during the summer, making it an ideal sight for nature students.

Photo by Maslowski & Goodpaster





CONNEAUT MARSH IN SUMMER looks like this. It offers excellent nesting areas for wood ducks and many other birds. The old channel dug to drain the marsh many years ago may still be seen.

number several thousands. These ducks spend two or three weeks feeding, courting, and resting here where a few blue-winged teal, and occasional pairs of shovellers and gadwalls appear.

Diving ducks become more numerous as April progresses and rafts of scaup, redheads, canvas-backs, buffle-heads and the comical ruddy ducks are found bobbing about on the deeper open sections of the marsh. Scattered about with these divers are a few pied-billed and horned grebs, and numerous coot. The coot are easily recognized as their white bills glisten in the sunlight.

Canada geese and whistling swans both visit Conneaut Marsh, feeding and resting for several weeks on the open shallow section away from human disturbance. Although their numbers never approach that of the ducks, the majestic beauty of the swans and the clarion honking of the geese add much to the waterfowl spectacle during April.

Baldpates become quite abundant in late April and are second only to

the pintail in number. The widgeon, as they are often called, spend their time in the flooded brush communities where pairs of mallards and blacks also abound. The deep water along the channel on the lower wooded section attracts the American merganser and its beautiful little cousin, the hooded merganser. Since both are mainly fish eaters, the deep water here provides them with plenty of food.

Many wading and shore birds, the sandpipers, yellowlegs, herons, rails, and bitterns, show up around the margins of the shallows in late spring. Their energetic feeding habits are amazing to watch as they search through the low weeds for a tasty morsel. In the evenings, the "winnowing" of the snipe and the "peenting" of the woodcock can often be heard as the males of these two species perform their courtship antics to attract their mates.

Sailing about over the marsh one can observe the various hawks, black terns, sea gulls, an occasional osprey, and the stately guardians of the marsh, the resident pair of bald eagles.



Photo by Maslowski & Goodpaster

FEMALE WOOD DUCK uses a natural tree cavity for its nest but man-made nesting boxes make ideal substitutes. Conneaut Marsh has both kinds of homes for wood ducks.

The warm weather of spring also brings about a flurry of activity by the mammal population on Conneaut Marsh. The beaver are busy repairing their dams and houses which were damaged by the high waters. The muskrats, digging in the channel banks, are preparing their summer burrows after abandoning the winter houses. Raccoons, awake after their winter slumber, have tracked up the mud flats as they search every foot of the shore line for food.

As May progresses with warmer weather, many of the large flocks of waterfowl move on northward, leaving only a few scattered stragglers. By the time June arrives the spring migration has passed through Conneaut Marsh, and only the residents are left to spend the summer here.

Certainly spring is an ideal time to visit Conneaut Marsh for observing

wildlife. Select a pleasant weekend for your trip to the marsh and you will surely be treated to an unforgettable spectacle by hundreds of waterfowl. Many of the flooded sections are readily accessible as good hard surface roads pass right through them. The birds themselves are surprisingly fearless at this time and pay no attention to nearby cars.

Archers also can spend many enjoyable hours here in the spring shooting at carp. The warm days of late Spring bring thousands of these large fish into the shallows to spawn and they offer exciting sport for the bowman.

Summer

The dense-lush vegetation extends over all of Conneaut Marsh except for the channel and a few deep pools from mid-June until the frosts hit in October. This vegetation provides ideal cover for the rearing of young by the marsh's residents. Several pairs of wood ducks, hooded mergansers and mallards begin their nesting in April and by June or July the female can sometimes be seen with their broods as they cross open spaces. They spend most of their time in the thick spatter-dock (yellow water lily) patches where the young find plenty to eat. The main food of the ducklings is insects and they chase them about through the leaves during all hours of the day.

Great blue herons, green herons, American bitterns, the little least bittern, Florida gallinules and a few coot also nest on or near the marsh. The dead tree trunks on the flooded sections furnish home sites for woodpeckers, tree swallows, screech owls, and starling. Kingbirds, red-wing blackbirds and numerous song birds make their nests in the thick shrubs along the marsh edge which offers them plenty of protection. The little marsh wrens outdo most of the birds when it comes to homebuilding; they construct their cylindrical homes high up in the cattail stalks.

In some years, you may see a large pure white heron-like bird on the marsh. This is the American egret which is visiting here for a few days as he vacations northward from his nesting range. The little, bright orange song bird flitting about in the brush is the prothonotary warbler, which also nests in the thick cover.

The elusive white-tail doe and her fawns, almost always twins or triplets, appear early in the mornings as they forage in openings along the wooded borders. Summer is the time when young cottontail rabbits seem to be everywhere around the marsh. In the marsh itself, the young beaver and muskrats learn the tricks of the construction business from their patient parents.

Summertime is the favorite season for anglers, who can always be found in the evenings near the bridges across the channel. The catches consist mostly of bullheads and sunfish, but occasionally a big carp or northern pike will grab the bait and provide plenty of excitement. Large bullfrogs furnish fine sport and good eat-

ing for the frog hunters in July. These men use small boats to get around in the thick cover and try to shoot the frogs with 22's.

This part of the state also has a few brave individuals who are devoted turtle hunters. Their quarry is the large snapping turtles which live in the wet areas. These hunters wade about in the waist-deep water and poke with a short pole or search with the bare hand in the vegetation for the snappers. When they locate one, they feel around the shell and try to grab the tail, thereby capturing it. These hunts often produce some huge ugly specimens, a lot of delicious turtle soup, and many tall stories.

Autumn

The southern movement of waterfowl through Conneaut Marsh begins surprisingly early. Blue-winged teal and pintails start showing up in late August and are generally fairly numerous in September. Most of them move on by October except during abnormally warm years when some are still present for the gunning season.

DRAKE WOOD DUCK is the brightest colored waterfowl of them all. In full breeding plumage, he is even considered by many persons to be the showiest bird of all.

Photo by Maslowski & Goodpaster



The greatest usage of the area by sportsman occurs in October during the first few days of the annual waterfowl hunting season. At this time several hundred hunters descend upon Conneaut Marsh and the variety of boats, guns, dogs, decoys, clothing and duck calls presents a colorful sight. Needless to say, the marsh is soon shot out as the surviving ducks head for the refuge or clear out entirely. The hunting pressure is light after the first few days and does not pick up again until colder weather in November brings in the flights of mallards and blacks. A few diving ducks and an occasional flock of Canada geese are the added reward of the hunters who brave the roughest weather late in the season.

Small game hunting attracts many sportsmen to the areas bordering Conneaut Marsh as cottontails and ring-necks are generally plentiful. A few grouse and woodcock also provide tricky shooting for those who go into the thick brushy patches. The woodlands around the marsh are gaining in popularity for big game hunting as some of the nicest deer trophies in the state are bagged here every year.

Fall is also the season when the mammals are preparing for the approaching long winter. Large mounds of vegetation now dot the open marsh as the muskrats build their winter homes. Beaver likewise add mud and limbs to their lodges and store additional food near them. The raccoons, now fat from their foraging trips, are ready for sleeping during the cold weather approaching.

Winter

Although we might expect Conneaut Marsh to get some rest now that winter has arrived, this is not the case. The marsh provides many acres of excellent cover for furbearers, and the local trappers spend a lot

of time here before the freeze-up. Muskrats make up the bulk of the catch and several thousand are taken annually. A few mink and beaver are also harvested during their respective seasons. The trappers have many pleasant hours with their past-time and the income derived from it is small reward for the weather they have to brave.

Winter really gains control over the area when the marsh freezes up solid and is snow covered. Only an occasional patch of open water is then present along the flowing channel but a few mallards and blacks stay here as long as it remains open. The dense swamp rose thickets on the edge of the channel provide good winter shelter and food for many pheasants which have been forced out of the open farm land by the deep snows. The tracks in the dogwood and cattail patches show that the rabbit has also found a secure place to spend the winter. The low woodlands with their plentiful supply of tender browse attract many deer and afford them protection from the brisk winds.

Although Conneaut Marsh may appear deserted and bleak during the winter months, it is a very important wintering area for the wildlife of the region. A visit to the area in this season will impress the sportsman with the necessity of winter cover for the survival of wildlife.

"Multiple use" is a phrase often used to describe the recreational resources of a particular area. Few places offer the varied year round activities for sportsmen as do large wetlands and Conneaut Marsh is no exception. In this day of vanishing natural recreational facilities, let us be thankful that Conneaut Marsh is owned by a public conservation agency and is being saved for our enjoyment for years to come.



Photo by Leonard Lee Rue

The Weasel---Bloodthirsty Conservationist!

By Roger M. Latham

KILL! KILL! KILL! All night long and practically all day long. A quick scurry in the leaves, a terrified squeak or squeal, a few minutes of bloody orgy, and then on again as avid and unsatisfied as ever to the next victim. No careful stalking, no watchful waiting for this fellow; no time for that foolishness. He has to keep going, always on the run, always half starved. In and out among the rocks, through the brush, down the

holes, inside the hollow stumps, anywhere, everywhere there might be another mouse, shrew, mole, chipmunk, or rat. Hair or feathers are preferred but slippery and scaly skins are acceptable, too.

This is the weasel, master hunter of the meat-eaters, tireless little monster of the fields and woods, scourge of the swamps and swales. Oh, for a bird dog with some of these qualities! This mighty mite knows no fear.



Without hesitation it attacks and kills some things ten to fifteen times its size. It thinks nothing of jumping a cottontail, slashing the veins in its throat, and then dragging the heavy carcass to some retreat on the dead run. A housecat with the same strength and ferocity would kill a full grown sheep or a calf and drag it up on the back porch.

This power-packed package of potent persistence doesn't dare relax for long. He lives so fast and uses up energy at such a rapid rate that he has to spend about half his time eating. In fact, he probably eats close to his own weight every twenty-four hours. Imagine a *man* having to put away 100 to 150 pounds of food every day to keep alive! A big male weasel may travel several miles in one night and never leave a ten-acre swamp or a five-acre patch of brush. This is how thoroughly and tirelessly it covers its hunting grounds. The only reason mice, shrews, and other small animals survive at all is because they produce young faster than the weasels can catch and kill them. A single female field mouse starting in early spring can have 2200 descendants by fall. No wonder weasels keep so busy!

Trappers know that the larger weasels are valuable furbearers. In the more northern states and on into Canada, these small animals often turn white in winter. Skins from these are the domestic "ermine" of the fur trade. Twice each year the entire coat is shed and is replaced by a new one of a different color. This is done gradually, so that in the middle of the molt white hairs are mixed with brown. At this stage, these worthless hides are called "gray-backs."

Many trappers still believe that these two changes of coat are caused by the warming weather in the spring and the cooling weather in the fall. Scientists now know that the lengthening of the days in the spring and the shortening of the days in the fall are

the real reasons. They have shown that a pure white weasel in mid-winter can be put in an outdoor pen and be made to turn to brown in a few weeks by turning on a light a few extra hours daily. Or a mid-summer brown weasel can be made to turn white, even at the usual summer temperatures, by darkening its pen and thus shortening the days.

There are 36 different kinds of weasels in North America north of Mexico, but many of these are quite similar except for size and slight differences in color. The very largest weigh no more than about ten ounces and the smallest as little as an ounce soaking wet. The least weasel, the smallest American carnivore, weighs only one ten-thousandths as much as the largest of our meat-eaters, the great Alaskan brown bear. Yet this arrogant atom kills mice and other small animals just as ferociously as its larger cousins. Imagine an animal just about the size and length of your middle finger jumping on a big field mouse and disposing of it in a very few seconds. This little cuss doesn't even have the typical long, black-tipped tail of the other weasels. Instead its tail is only about an inch long and is the same color the full length.

Even though weasels live entirely by preying upon other animals, they, too, have natural enemies. Hawks and owls are among the worst. The weasel apparently becomes so engrossed in the pursuit of his next meal that he sometimes makes the fatal mistake of not watching the sky closely enough. Foxes, coyotes, wildcats, and housecats are among the few mammal predators which are fast enough and cunning enough to catch the weasel. But unless very hungry, none of these will eat one. I have seen weasel carcasses lying at a fox den untouched when the cottontails, pheasants, chickens, and other better tasting items were eaten down to the last shred. After all, a weasel does stink and stink

badly. Like a skunk, it has two glands at the base of its tail which spray the most vile-smelling yellow liquid imaginable when it's hurt or very badly frightened. So every weasel killed by another predator automatically smells to high heaven. No wonder they decide not to eat them!

Snakes also take weasels and usually catch them by cornering them in holes in the rocks or underground. Sometimes one literally runs straight into the mouth of a snake as it threads its way through the underground passages and rock crevices. One time I killed a large timber rattlesnake in northern Pennsylvania and knew from the bulge in its middle that it had recently fed. When I opened the snake I found a medium sized weasel swallowed whole.

Now that we've talked about the weasel's habits and homelife, and a little about its size and disposition, we can get down to the most important question. *Is the weasel good or bad?* Everybody knows they kill rabbits, and some game birds, and some songbirds, and occasionally other desirable kinds of wildlife. Everybody knows they kill poultry and that definitely isn't good. But what else do they kill? What do the stomachs,

the droppings, and the tracks in the snow reveal? Are weasels really bad? Do they hurt small game hunting? Should they be controlled? Would a bounty on weasels help hunting?

The best way to answer these questions is to look at the facts. First of all, what do weasels eat, and how do you find out what they eat? Wildlife scientists have examined the contents of hundreds of weasel stomachs. They have looked at thousands of weasel droppings (scats) collected around dens, and have carefully and faithfully recorded what they have seen in the snow. This animal has a bad reputation with most sportsmen because of the stories handed down from father to son, often colored and exaggerated through retelling. Or a hunter actually sees a weasel attack a rabbit or a farmer's chicken and he immediately assumes that this one instance represents what happens every day of the year. He has no way of knowing what happens inside the rock piles, or under the matted grass and briars of field borders or fence rows. How many sportsmen have looked inside the stomach of a weasel or torn a dropping apart? How many have followed every inch of a weasel's trail in the snow to find out exactly

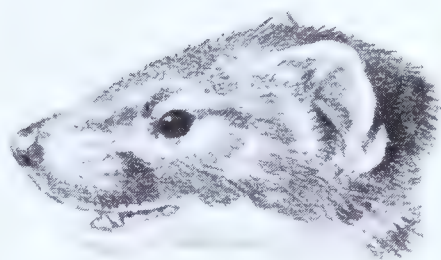


what its activities were the night before? Only in this way could a man be fair in condemning any animal.

It's his ravenous appetite which sometimes gets him into trouble but it is this same appetite which makes wildlife and farm experts say, "The weasel is a valuable asset in any agricultural community." As a mouser he is one of the farmer's best friends. Rarely does the farmer, or his cat, do much mouse or rat control beyond the close vicinity of his buildings. He needs the weasels, owls, and hawks to take care of the mouse problem in the fields.

One-third of the contents of 191 weasel stomachs from New York was made up of the remains of meadow mice alone. Of course, there were other kinds of mice represented, too. Five independent studies of weasel food habits made in eastern United States showed that 70, 83, 76, 88, and 93 per cent of the diet in each case was mice and other small mammals such as shrews, moles, chipmunks, rats, etc. Only 13, 17, 14, 8, and 0 per cent was cottontail rabbit. Game birds were almost entirely absent in these hundreds of stomachs.

True they kill chickens and other poultry occasionally, but aren't these losses usually the farmer's own fault? Modern poultry growers rarely lose any stock in this way because they take precautions against it. The man who has trouble usually has old broken down chicken houses, with plenty of holes in the floor and sides. Quite often the weasel is attracted to the buildings in the first place because the premise is running alive with rats and mice. They will seldom come to the buildings if there are no old board piles, and other junk cluttering up the barnyard and vicinity. If the chickens are properly housed, a weasel is a good thing to have around the barn. Those rats it doesn't kill in a couple of days take to the hills in sheer terror. One man once found over 100 rats and mice piled



up by a weasel under the floor of a chicken house. All were freshly killed.

It seems obvious that the weasel is a friend of the farmer—or at least a friend of the industrious, tidy farmer. Now, is it possible that it could also be a friend of the hunter—the unprejudiced well-informed hunter? Yes, very definitely!

Let's get back to its mouse-killing ability again. How could this help hunting? It can and does in several ways. For one thing weasels kill millions of white-footed mice (deer mice) and other kinds of mice which live largely on seeds, nuts, and dried fruits. A single white-footed mouse was known to store a peck of beech-nuts in an old hollow tree. They will collect great quantities of acorns, chestnuts, basswood, cherry, dogwood, viburnum, and many other seeds of trees, shrubs, and smaller plants. This is all precious game food needed by ruffed grouse, wild turkeys, bobwhites, squirrels, deer, and other kinds of game. If one deer mouse will store a peck or more, what can several millions in forests and fence-rows do to the game food supply?

Then there are chipmunks, gophers, and red squirrels in the forests which have been found to be mischievous egg stealers. They roll the eggs of grouse, wild turkeys, and other game birds out of the nest and

often abandon them without breaking them. But the egg is lost, and the whole nest may be lost, to the hunter. If each chipmunk or gopher rolled only one egg out of a nest a week, this could be hurting the hunter far more than the weasels which only occasionally kill a game bird. In the South the cotton rat was found to be very destructive to quail nests, often eating every egg. Isn't the weasel really a friend of the hunter when he keeps whittling away at these pests year in and year out?

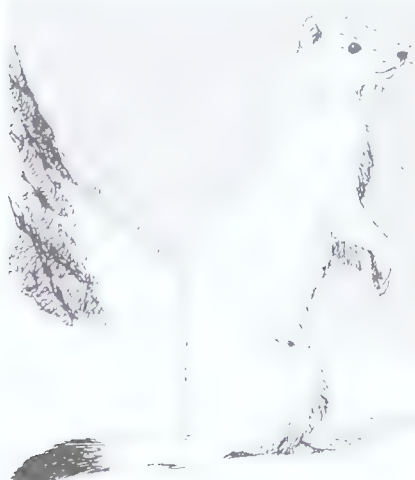
What about the rabbit killing? Some almost always show up in the stomach examinations and there is no denying that quite a few are killed wherever rabbits and weasels are found together. But studies have shown that the number killed by weasels is hardly worth talking about as compared to the tremendous loss from disease, from highway traffic, from larger predators including dogs and housecats, and a dozen other causes. Millions and millions are born each year that never live to the hunting season. And of those which do, what happens? *Less than twenty per cent of the cottontails are killed by hunters even on the heaviest hunted areas of the East.* In most places less than five per cent are killed. Yet the wildlife men figure that as many as forty to sixty per cent could probably

be taken by the hunters without hurting next year's supply.

At the same time, these wildlifers have demonstrated that a little food and cover management in the right places will increase rabbits several hundred per cent without any effort to control weasels or other predators. Merely by cutting the taller trees and brush in the grown-up fence rows and letting them fall in a windrow, and by cutting a thirty to sixty-foot border around woodlots, good rabbit cover can be made immediately where practically none was found before. By planting a few strips of clover or good grass alongside this cover, if clover or grass isn't already there, the proper food can be supplied. And that's usually all that's needed to make plenty of rabbits, most often several times as many as there were before the work began. This should certainly convince hunters that weasels aren't the cause of poor rabbit hunting.

Some sportsmen who are hard to convince, even with facts like these, want a bounty put on the weasel. There is plenty of evidence that this reward would do little to reduce the number of weasels even if the critter was proved to be hurting the small game hunting.

Pennsylvania had a bounty on weasels for years and years and spent one and a half million dollars in attempting to control them. In spite of the constant bounty, the numbers of weasels kept climbing until at the peak almost 90,000 were taken in a single year. In 1951 the bounty was removed because it was realized that this was not making better hunting. And believe it or not, today there are just as many rabbits as ever. A study of the bounty in Pennsylvania revealed that over seventy-five per cent of the weasels sent in would have been killed whether a bounty had been in effect or not. The pelt price was sufficient inducement to keep the trappers after them, and this fur har-





vest certainly seems to be the sensible way to take any surplus.

As a matter of fact, Mother Nature does a pretty good job of controlling weasels herself. When they get too abundant the hawks, owls, snakes, foxes, cats, and others really go to work on them. From Pennsylvania's bounty records it appears that when foxes get real abundant, weasels become scarcer and scarcer. Evidently old Reynard can't resist any opportunity to show this little competitor who is really the boss of the fields and woodlands.

So when we get right down to facts and snoop into his private life a little, we find that this busy bundle of boundless energy is a pretty nice guy after all. You can hardly help but admire him, when you find out that during all the years the hunters and farmers were calling him nasty names, he was actually working his heart out for them. When most of us humans are inside the house on zero

nights with our feet in the oven, this little conservationist is bouncing over the snow, in and out among the tussocks, searching endlessly for that female field mouse which is planning on the 2200 descendants this coming year. Sure hope he finds her!

The fiercest animal on earth is not the lion, tiger, or leopard, but the tiny shrew. It will attack and devour almost any animal up to twice its size and eats its own weight in meat every three hours.

* * *

The changeable mole, *chrysochlore*, has fur that appears different in color as the light in which it is viewed is changed. Sometimes it appears a golden or bronze-green, then a bronzed red. The color changes as the animal moves.



CONSTRUCTION OF DIVERSION DITCH was part of a complete soil conservation plan on the Harold Jackson farm. To date over 61 miles of these terraces have been constructed on the Corey Creek Watershed.

Watershed Programs Work!

By Charles B. Slaton
Assistant State Soil Conservationist

THOSE three words pack a mighty important message for Pennsylvanians—whether they call themselves merchants, bankers, laborers, or farmers.

The story behind watershed research and development in Pennsylvania is short and dynamic. It is the story of people who recognize that Pennsylvania's expanse of over 29 million acres no longer could withstand abuse.

Alert people interested in national welfare and the darkening plight of our agricultural society began responding to an alarm sounded by

soil conservationists in the dawning years of this century. National leaders first took note of America's rapidly diminishing soil, water, and wildlife resources shortly after the turn of the century.

Even then, with but small demands being made upon our farm and forest land, big thinking people could see that the nation's heritage of rich soil, dense forests and abundant water was not inexhaustible. They saw millions of acres wasted by erosion; once productive farms reduced to the point that they could no longer support a family. They saw scraggly, neglected

forests of second-growth timber and they saw the supply of water drop faster and faster as a booming, industrial nation grew thirstier.

America was developing the symptoms of an anemic nation—and Pennsylvania was as anemic as any other.

Though the doctors had long diagnosed Pennsylvania's case, the "cure" didn't begin until 1937. Then, the first soil conservation district was born in Indiana County. By the time World War II brought paralysis to such efforts, six districts were in operation. The expansion of the soil erosion control program was necessarily halted while Pennsylvania went to war.

United action to do something about our fast disappearing wealth of land and water came on the heels of VJ Day. Individually, thousands of conscientious farm families adopted proven conservation practices—terracing,

strip cropping, tree planting and drainage and liming. The results were encouraging to both farmer and the interested groups who worked together under the guidance of the U. S. Soil Conservation Service.

But, something was missing. Pennsylvania is made up of streams, rivers, hills, mountains and valleys. Conservation practices were following the outlines of farm boundaries made by the surveyor's transit. Nature refused to observe these boundaries.

What was needed was this: A conservation plan that would take into consideration the need for managing all water in an area drained by a particular stream.

All streams collect water from a large land area. This pattern—or watershed—is created by Nature. It naturally follows that conservation practices can be most effective when the entire watershed—or drainage



CONSERVATION FARM PLAN is explained to Harold Jackson, right, by Soil Conservation Service technician Wilbur Thomas. Note the contour strip cropping in the background.



DIRECTORS of Corev Creek Watershed Association discussing the tree planting program with Wilbur Thomas of the Soil Conservation Service. Seated, left to right: Charles Boyden, Lee Wilson, Wilbur Thomas, Charles Hess, Stanley Seymour. Standing, left to right: Will Wilcox, Elmer Smith and LaVere Fogelsonger.

area—is under care. Clearly, watershed programs were needed. The problem facing the U. S. Soil Conservation Service was this: Getting people to work together as a group, doing the same thing at the same time.

Among the first group of people to recognize the need for watershed development were the members of the 83rd Congress who passed legislation to encourage and make possible the formation of watershed groups. Pennsylvania lost no time in taking advantage of this opportunity. Fourteen months after the bill cleared Congress, over 100 farmers accepted the Tioga County Soil Conservation District Directors' invitation to meet in the Music Room at the Mansfield (Pa.) High School. The farmers represented 90% of all land-owners in a 15,000 acre area later to be known as the "Corey Creek Watershed."

In the crowd that night was 41-year-old "Arch" Robbins. Here's what

happened to Robbins, his 160 acre dairy farm, and his family as a result of that meeting.

Robbins wasn't alone in his enthusiasm. In the days that followed, 102 farmers joined in the watershed plan. This gave the U. S. Soil Conservation Service leaders an organization of land owners who could attempt to put nearly every one of the watershed's 15,000 acres under control. The Corey Creek project was based on a five-year plan. It will end in July, 1958—and it will end as a success.

The Corey Creek story is important. In a nutshell, it is proof that watershed programs can work. Here is concrete evidence that local, state, and federal conservation agencies can work together in the broad field of conservation. It is the story of a well organized, cooperative effort between the local people and their governments. The local people initiated this project through their watershed as-

sociation working with the local soil conservation district.

To see what made the Corey Creek Watershed tick, let's go back to Arch Robbins. Like thousands of other Keystone farmers, Robbins was interested in farm conservation. He had long ago adopted field strips as a deterrent to water erosion. And, like others, he had many good ideas of his own about conservation. But through the years, he had been hard-pressed to make his farm provide for his growing family. He had worked long hours, tilling rented acres, to make ends meet. Now, as he listened to conservation officials explain the proposals for a Corey Creek Watershed program, Robbins realized that here was an opportunity to do something for his farm and his family. The Corey Creek Watershed was born that night. Arch Robbins, like his 102 farm neighbors, became a co-operator in the Tioga County Soil Conservation District.

As a cooperator, Robbins began receiving assistance from Soil Conservation Service technicians who helped in developing a plan which took every acre of land into consideration. Engineers, soil surveyors and plant experts joined Robbins in determining what conservation measures were needed on his farm. When the study was complete, Robbins knew that his farm needed better land drainage and erosion control measures. His conservation plan was complete—field by field.

He knew where trees were to be planted; where he could build a needed farm pond; what grasses and legumes were best suited to his soil types; how to manage his farm on a crop rotation plan which would provide his 50-cow dairy herd with sufficient quality feed.

Robbins went to work. Three years have passed and Arch Robbins has become one of Pennsylvania's most ardent promoters of farm conservation—though he's got keen competi-



ARCH ROBBINS, a cooperator in the watershed program, studies his conservation farm plan in preparation for spring and summer activities.

tion from 102 other members of the Corey Creek Watershed. Here's what happened. Robbins enthusiastically adopted the program outlined by the Soil Conservation Service. He no longer must rent additional land to provide his herd with sufficient forage. He will tell you that his overall production has increased by nearly 50 per cent. He takes more pride in farming, and he has more off-the-farm hours in which to hunt, fish, and relax. Robbins and his neighbors are all proud of what they've done. But the pride in the Corey Creek Watershed reaches far beyond fields and farm homes.

A lot of individuals and groups helped to make the project a success. Technical help came from the U. S. Soil Conservation Service; cost-sharing assistance came from the Agricultural Stabilization Conservation Service; woodland plans were developed by the State Department of Forests and Waters and by the U. S. Forest Service. The Pennsylvania Game Commission contributed trees for reforestation; Pa. State University helped with soil research and analysis; and community businessmen gave encouragement.

Watershed programs work!



The Talented Fox

By George Laycock

THE red fox is a tricky, medium-sized, dog-like animal that doesn't give a darn what you think of him. He eats well, wears a beautiful coat, is good to his family and has a sense of humor. And regardless of the fact that men and boys are always trying to take away his fancy coat, the red fox has prospered.

He was living here when the white man came. But the people who study such things believe that most of our red foxes today descended from those brought over from England a century ago to run before the hounds. And the red fox has increased as the country was settled. He is not an animal of the great forest. He lives better near civilization, not in the barnyard but within reach.

The red fox is living evidence that some wild animals do indeed have the ability to reason. Consider the story of the fox and the fleas. Fleas try to make life miserable for foxes and often succeed. But the fox, so the story goes, has learned how to out-smart the flea. He comes down to the water's edge carrying in his mouth a piece of bark. He swims out into the mill pond and with the bark still in his mouth gradually submerges until only his nose sticks out. The fleas avoid drowning by moving out of the fox's fur and onto the piece of bark. The fox, one may assume greatly re-

lieved, scrambles out of the water and scampers off through the woods, leaving the fleas to paddle their own canoe. Some naturalists insist this never happens. But it sounds like something every fox should know.

Fox hunters agree that the fox is smart. They may deny that he is smarter than their hounds. But he is. There are times when the fox seems to enjoy the chase almost as much as the hounds. Rather than dashing for the nearest hideout, he may pass den after den and keep the chase alive.

He has a top speed of about 26 miles an hour but he is not a strong runner. In a showdown fight with a hound, the fox, which weighs in at about 10 pounds, is a goner. His strategy is to keep the contest from coming to blows. He does this with brain, not brawn. He will wade in streams, cross on logs, or run along the top of a stone or rail fence. Some people say, although it is widely doubted, that a fox will even hop onto the back of sheep to break his trail. And once the hounds are thoroughly confused the fox may offer his yapping laugh from over the hill.

Fox hunting for many a farm lad, and his father, too, is almost a way of life. The sport started in England when Viscount Lowther kept the first pack of hounds for fox chasing about 1660. In the eyes of hunters, the fox, formerly frowned upon, became a noble animal.

When fox hunting reached this country the red jacket of John Peel was joined by the work clothes of farm people. Instead of following the hounds on horses, it became enough to sit the night through on a hill top, warmed by a fire and pleasant com-

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panionship, and listen to the hound music in the valley below. No night music is sweeter to a fox hound owner and no time better spent. To this day fox hunting is a sport of major proportions. Hound owners can pick out their dogs by their voices and even tell what position they hold in the pack by the way they sound. "Hey, hear that deep 'choppin' mouth? Old Tick's leadin' the pack again."

But when the fox is not being chased by hounds, he has plenty to keep him busy. Family duties demand a lot of his time. The male and female are usually life-long partners. The young, five of six to the litter, come in March or April. For the first 10 days, with eyes still closed, they look like fuzzy kittens. They stay in the den for five or six weeks and the vixen keeps her mate outside. But he is still the family hunter and he brings to the door of the den a variety of treats—fish, mice snakes, turtles, insects, small birds, poultry, and leaves them for his family. His eating habits are both good and bad from the farmer's point of view. So farmer and fox usually ignore each other . . . until the pullets begin to disappear.

When her family is five or six weeks old the female lets them go outdoors and play in the warm sunlight. There they romp and engage in foxy little games until mamma barks and herds them back inside. If you happen on a family of foxes at this moment the old mother may go house hunting. She moves her whole family, one at a time, cat-fashion, to a new den. One fox researcher observed a fox that moved her family a mile. A week later she moved again, this time a half mile. Maybe she was tired. She made four moves before she finally gave the fox watcher the slip and, one may assume, settled down unmolested to raise her young.

The fox, wary though he is, may show real courage in defending the family. One observer reports watch-

ing from 75 yards while a family of kits played before the den. The unsuspecting vixen finally ambled off in his direction and didn't discover him until she was only 10 feet away. She dashed to a ridge 100 yards distant and barked excitedly for the kits to go below. Busy at play, however, they ignored her.

The man moved toward the young foxes to test the mother's reaction. Three of the kits dashed into the den. The fourth one stayed outdoors. Such disobedience was more than a mother could bear. She dashed right past the observer, cuffed her offspring into the den and dashed off again.

The fox family stays together until fall. During the last part of the summer the young go along on hunting trips and study their parents' techniques in searching out food with the aid of their sensitive noses.

Well before the cold of winter, usually by mid-September, the young foxes are practically full grown. Their coats are smooth and immaculate, reddish above, white below, black tips on feet and nose and white tip on the tail, a striking color scheme.

The fox's tail is important, especially to the fox. It is his counterbalance when he makes swift turns while pursuing food. It is his blanket on cold winter nights. When he lies down he drapes the long, beautiful brush over himself.

You may or may not love the colorful and dashing red fox, depending perhaps, on whether you hunt foxes or raise chickens. But the fox, it appears, is here to stay. And surely the countryside would be less interesting without him.

Outsmart the red fox if you can and live with him if you can't. He'll do as much for you. And he'll help keep you alert, for the fox is nimble and the fox is quick and the old English folk tune tells it well with, "John, John the gray goose is gone and the fox is off to his den'o."



Penn State's Conservation Education Workshop

A Credit Towards Conservation's Future

PART III

By Joseph E. Simon

THERE may have been a time when you used to dream, as I have dreamed, of seeing twelve point bucks, brilliantly colored ringnecks, soaring ducks, splashing beavers, chattering squirrels, lumbering black bears and majestic turkey gobblers. But that was many years ago when some of these game species were so few in numbers, extinction seemed inevitable. It is no longer necessary for us to dream about these awe in-

spiring game birds and animals. They can now be seen in the forest, in the fields and in the air, all because of those who believed that these wonderful game birds and animals of ours need not go the way of the heath hen or the passenger pigeon.

Because of this faith, the Game Commission with unselfish cooperation from the Pennsylvania Federation of Sportsmen's Clubs, the Pennsylvania Federation of Women's

Clubs, service clubs and garden clubs, launched a program of game management and restoration that assured future generations of good hunting. This program, especially as it relates to the wild turkey, has been so spectacular that other States have sent in men to study our program, so they could do the same.

Even though the immediate threat of extinction of these exciting species has passed, I cannot feel that we should, now and forever, rest upon the progress we have made to date. I can neither content myself that we have reached the ultimate and nothing more can be accomplished. I can still see great strides to be made in game propagation and management; strides capable of increasing the per acre yield of game.

As I see game stunted by a lack of food or by the lack of body building nutrients in the food they eat, I cannot help think of the size they would have attained on a proper diet. Game is a crop, a crop that can be increased or decreased, depending upon the seed stock, how it is nurtured and fed, and the conditions under which it must live.

Since everyone profits from wildlife, everyone must share in its conservation and from my observations, every man, woman and child in our State is willing and desirous. They only need someone to show them what to do.

So, the big question is, how can we lead the school children, and adult men and women, down conservation's rewarding paths? First, we can encourage teachers to take the conservation education workshop at Penn State. Every sportsmen's club could make it their goal to recruit at least one teacher for the workshop. The number of teachers attending the workshop has been low, primarily because teachers are not familiar with its existence, the scholarships available, and the fact that the credits can be used to make their teaching cer-

tificates permanent. The teacher who takes the conservation workshop becomes conservation's valuable partner and a whole new realm of teaching possibilities become his or her valuable possession.

I have observed that conservation can be incorporated into every subject, into every grade and by every teacher in every school in the State. It is quite apparent that whenever conservation is incorporated into a lesson, the lesson immediately becomes more interesting, more purposeful and more meaningful.

Have you ever seen the eyes of school children sparkle with wonderment at the sight of quail chicks? Or, have you watched first graders tenderly nurture forest tree seedlings a nurseryman had given them to plant? It is quite gratifying to see high school boys do odd jobs to get enough money to pay for the material to build a quail brooder pen and then to watch these same boys take the birds that they raised to a nearby field and release them. Be-

NATURAL INTEREST in wildlife is shown by Jacqueline Steinbiser, school secretary, as she counts bobwhite quail chicks for distribution among FFA groups in Westmoreland County schools.





FARM WOODLOTS are managed under good conservation practices when farmers know how. As a result the well-managed woodlot yields more timber, provides food and cover for wildlife, aids in soil and water conservation.

sides safeguarding one of our most valuable resources, conservation helps to develop in our youth consideration for the rights of others, to enjoy the finer things of life, and to give freely of themselves, their efforts and their money.

A trip to the saw mill helps our youth to visualize how good forestry practices pay off. It is also a good field trip for a math class to calculate board feet and physics classes to study levers, pulleys and engines.

Teachers will find that conservation soon becomes the reason why students want to learn their sciences, their math, their art, their chemistry and their music. The English teacher who thinks conservation cannot become a living dynamic part of her classes needs only to recall the works of our literary geniuses and note how many of their works have a conservation background. That is, they deal with trees, flowers, brooks, birds, the snow and the rain.

I have known many teachers who have avoided incorporating conserva-

tion into their subjects simply because they felt they needed to know the names of all the birds in the air, the name of every tree in the forest and the name of every fish in the stream. This of course is unnecessary, although a vast amount of knowledge of nature is helpful. There is a difference between nature study and conservation. Where nature study is concerned with names, habits and peculiarities of wildlife, conservation is more concerned with their wise use. Thus, it might be said, the nature student asks what kind of a tree is it, how tall will it get, and how often will it produce seeds? The conservation student will ask how much timber can be cut from this tree, how can maximum use be made of the tree, and are we growing timber as fast as we are cutting it?

Every school should consider the benefits that can be derived by placing due emphasis upon conservation, not only because of the ways we will benefit as a State and a Nation, but also because of the great personal

benefit that will come to the student. A student who learns to love and care for trees, birds and animals, will also learn to have a profound love for people. Armed with this love, the student grows up to be a credit to his fellowmen, honoring their rights, safeguarding their possessions, and binding their wounds.

Secondly, and of equal importance, is the taking of conservation education to adults. The possibilities with adults can be more far reaching than with school children, because adults have the means and the know how to put vast programs into operation. I have seen adults steeped in conservation virtually change a countryside from depletion and poverty to abundance and prosperity.

Although the value of the Game Commission game rearing programs for clubs is often recorded only in terms of the number of birds raised and released, the unrecorded and unseen benefits are far greater.

Men who raise the birds learn to know them, their habits and their needs. Soon they are planting food shrubs, piling up brush for cover, safeguarding den trees, and packing hundreds of pounds of feed into the fields and forests. Until these men began raising their game birds, they never realized how important food and cover were to their feathered friends.

Conservation does not stop with a single portion of our resources; it grows and grows in scope. The knowledge gained from raising a few birds, or trapping a few rabbits, can be the spark that kindles a fire which will warm the heart for years and add to the delectation and enjoyment of thousands.

When I first heard of rabbit trapping, I didn't realize the true conservation concept that was being practiced in the simple process of taking rabbits from populated areas where they were damaging gardens and shrubs, and releasing them where

they could multiply to provide sport and meat for the hunter.

We have in our Commonwealth, thousands upon thousands of acres that produce nothing of an economic value. Thus a resource, the soil, is not being used wisely. However, when we take the same soil, plant it to crops that will furnish food and cover for game, then take game from over populated areas or from areas where they are causing destruction, and transplant them to these once unproductive fields, these fields will, in due time, be harvested by the hunter. Besides the economic value of the meat thus harvested, the farmer will benefit from fewer weed seeds blowing onto his fields and from a reduced insect population resulting from birds and animals feeding upon the insects, their eggs or their larvae.

Some may look upon the improvement of our waste lands for hunting purposes as being costly, but when we consider the vast expenditures made for football fields, baseball fields and golf courses, on which only

LIVE-TRAPPED RABBIT is prepared for shipment to an area open to public hunting. By removing these cottontails from towns where they cause damage to gardens and shrubs, a wise use is made of a natural resource otherwise wasted.





GOOD LAND MANAGEMENT is learned on the ground as agriculture teachers study latest techniques under the leadership of Soil Conservation Service personnel and faculty members from Pennsylvania State University.

a limited number can play, in comparison to the small cost of improving an acre of wasteland on which an endless number of people can roam and from which an endless number of people can find recreation, we are inclined to wonder why we have been so negligent.

As our lands produce more and more game, the number of hunters will increase. This increase will mean more wool for hunting clothes, more steel for guns, more leather for shoes, and more money for gasoline. Not only will this mean greater prosperity for the retailer, it will mean greater demands for farm products, more working hours for the steel mills and

more take home pay for the oil refiner.

This, the average American has overlooked and it is one of the reasons why conservation education should begin in grade school and continue for the remainder of a person's life. Visiting a saw mill, raising quail, or trapping rabbits, can be the beginning of a new era.

The Game Commission, The Soil Conservation Service, the College of Agriculture, and similar agencies, stand willing at all times to help individuals and organizations further the cause of Conservation. We only need the desire.





FIELD NOTES



Working For Wildlife

MIFFLIN COUNTY—During the recent heavy snowstorm, Mr. Richard Myers, Lewistown, donated the use of a bulldozer and an operator to open seven miles of road in the Seven Mountains section to get to turkey feeders.—District Game Protector George Smith, Reedsville, Penna.

Trained Game

NORTHEAST DIVISION—Now and then you hear some good stories but this one is not to be kept from any one. A person of good integrity related a story to me the other day that should stop a freight train. As the story goes, this man was hunting along the railroad and his dog came to point. While the dog was on point, a train came by and flushed the birds. Two grouse flew into the side of the train and were killed. The man picked up his 2 birds and proceeded home, hence, this is the story of killing 2 birds with one train.—Conservation Information Assistant John C. Behel, Wilkes-Barre, Penna.

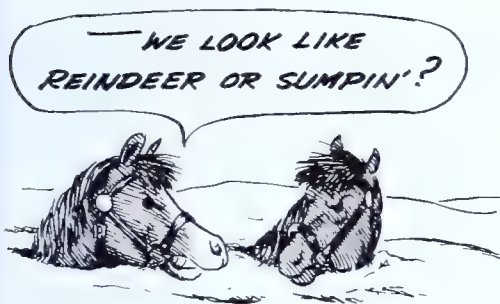
Winter's Aftermath

CENTRE COUNTY—The fact that this winter has been severe on game is starting to show up. On February 26 I picked up a live deer that dogs had put down in deep snow. I took it to my headquarters, but it died the next day, too far gone. The same day I picked up a dead turkey in the Black Moshannon area. It was an adult hen that weighed about 4½ pounds. There was no evidence of disease in the bird. On February 27, I found a small, last year's fawn down under some laurel. It was still alive, but barely so. It weighed about 30 lbs. The next day I found a small dead fawn in one of the hollows in Rush Twp. It would have weighed about 25 lbs. Examination of the marrow in the thigh bones showed definite starvation.—District Game Protector Robert H. Spahr Philipsburg, Penna.

Too Eager Eater

McKEAN COUNTY—While observing game at a turkey feeder, about ten deer came in. Eight of them were feeding together and two were trying to shake corn out of the feeder. I was watching the group of eight when one of the deer at the feeder seemed to be making an awful lot of noise. I looked around to see if we still had a feeder left and I saw that one of the deer had stuck his head through the bottom of the platform and was hanging by its head. I released the deer before it had done any injury to itself. I'll bet this deer thought the Game Protectors are really on the job.—District Game Protector John Putnam, Crosby, Penna.





Jingle Bells

CLEARFIELD COUNTY—During February we had several very bad storms and had a hard time getting to feeders in isolated areas to feed game. On February 26, through the cooperation of Mr. Duane Kyler, Supt. of the Brady Township Schools, the Faudy 4H Club, who are seniors in the Brady School, were given permission to assist me in taking feed into the Curry Run Area. Eight 4H Club members with their leader, Mr. Everett A. Cramer, and Norman Brown, Asst. County Agent, arrived at the point we had agreed on to make an attempt to get into remote areas. The 4H Club brought with them three ponies and a sleigh. We loaded the sleigh with four bags of corn. We tied two bags together and placed them on the third pony. The 4H Club then broke trail for the ponies as we had from 24 to 36 inches of soggy snow to go through. There was a lot of hard work connected with this venture, but at least we have the satisfaction of knowing that the turkeys, grouse and squirrels are not hungry in that isolated area.—District Game Protector Claude B. Kelsey, Troutville, Penna.

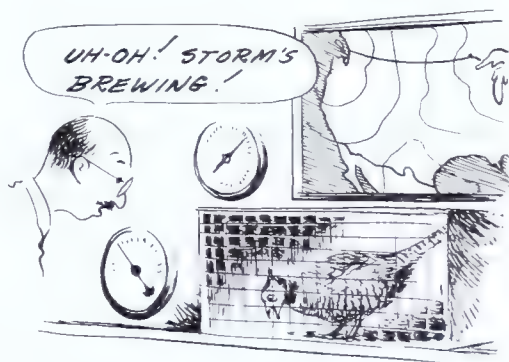
A Rose In The Storm

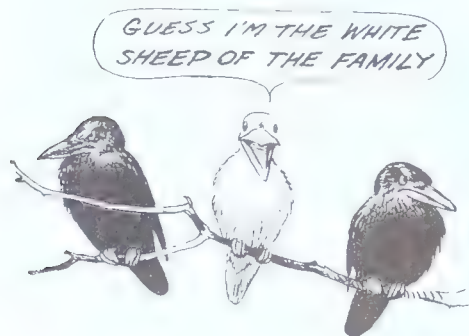
BERKS COUNTY—At times there are people who doubt the value of our Multiflora Rose hedges. It is fully understood that the seeds and bark have a very low food value. However, lack of food is seldom a problem in this Division. The rose

hedge and thicket plantings have given us some of the best cover to date. During the blizzard it was quite evident that our most widely used travel lanes were under the rose hedges. On February 13th, Stewart, Bachman and I saw a flock of 150 robins and 35 cedar waxwings arrive a bit early. The rose hedges along the boundary on Game Lands #160 near Pine Grove provided rest, food and protection for these early visitors.—Land Management Asst. Roy W. Trexler, Reading, Penna.

Snow Forecasters

LANCASTER COUNTY—Ring-neck pheasants again proved their worth as weather prognosticators on Friday, February 14, the day before the big blizzard which deposited a 16-20 inch snowfall in Lancaster County. (Weather Bureau officials, please note.) Wildlife lovers who had been feeding pheasants regularly prior to that date noticed that the birds would feed only in the early morning and late afternoon until the 14th when they were seen feeding during the entire day. To the informed and observant nature student this was an infallible sign of an impending blizzard of giant proportions.—District Game Protector John M. Haverstick, Lancaster, Penna.





Albino After All

COLUMBIA COUNTY—Wayne Derrick, son of a Farm-Game Cooperator near Millville, had been watching a certain crow for several weeks in late fall and early winter. This crow appeared every day on the farm with a flock of several dozen ordinary companions. What distinguished it from the others was the fact that it appeared almost pure white. Wayne bided his time and figured out ways and means of getting this "particular bird," alive if possible. Not long ago his chance came. The paleface sat on a tree, near the edge of the woods adjacent to a field. After what must have been a record stalk, Wayne got close enough to hit it with a 410 shot charge. It seems that but one shot grain struck the bird and broke a small bone in one wing. Wayne and his family nursed the crow and kept it in a box in the kitchen of the farmhouse. It seems to be on the road to recovery. Lately, it could fly from one room to another, and is partially tame. The color is pure white excepting black specks on the head and a few wing feathers. It is not a true albino.—District Game Protector Mark L. Hagenbuch, Bloomsburg, Penna.

Open Door Policy

WYOMING COUNTY—It seems the story of the "Open Door Policy" as related by Wyoming County Game Protector Tom Meehan, "of opening

the door to the corn crib and removing the heavy wooden lids from the turkey feeders on Game Lands #57 and allowing the bear to take the corn they wanted without the damage to the crib and feeders experienced in previous years," must have been read by some of the deer this year and broadcast to some of their close kin. These deer discovered a corn crib on a farm in Mehoopany Township, Wyoming County, operated by Earl Goodwin and his two sons Pearl and Paul. Without a door, this was an open invitation for them to come in and dine. From the shiny floor of the crib and the hoof marks it is quite evident there have been quite a few guests and quite a lot of competition to get up in the front row. This corn crib is located approximately 50 yards from the Goodwin's barn but the barn activities at chore time do not seem to bother the 8 to 12 deer that are daily visitors. Fortunately for the deer, the Goodwin Family is in accord with this "open door policy."—District Game Protector Philip S. Sloan, Tunkhannock, Penna.

Muskrat Eskimo

LAWRENCE COUNTY—One day during February, Deputy Cummins operating a bulldozer, was clearing a road of deeply drifted snow in Mercer County. While pushing a large drift of snow along the berm of the road, a muskrat suddenly arose from out of the snow and looked angrily at the operator at though he didn't want to be molested from his sleep and new winter home. The rat finally struggled off through the deep snow for other quarters where he would not be molested. I assume while out in search for food, the rat became snowbound near the highway and decided to stay and set up house-keeping.—District Game Protector Woodrow E. Portzline, Slippery Rock, Penna.

Junior Conservationists

ERIE COUNTY—Harborcreek High School, located in my district, is to be commended on its interest and efforts in wildlife conservation. Under the guidance of Mr. Franklin M. Dennis, Biology Teacher, Harborcreek has a real active conservation club. The club meets weekly and carries on several good projects pertaining to conservation of our natural resources. I have spoken to the groups on different occasions and shown wildlife films and notice genuine interest especially in wildlife conservation. One of their most worthwhile projects this winter has been their winter feeding of game. The club members and their advisor have distributed a lot of ear corn for small game which really has needed it in this area. After talking to their group recently on predators and the importance of predator control, I believe they plan to exert some of their efforts in this direction also. This is one phase in which the boys can have a lot of fun and also protect game by killing some of the worst predators. Perhaps the idea of having an active conservation club will spread and other high schools in the area will organize.—District Game Protector Roger Wolz, Erie, Penna.

Dinner Bell

ERIE COUNTY—Many sportsmen and interested individuals have assisted in feeding game, especially pheasants this winter. F. Walker of Edinboro has had over a hundred birds coming to his feeding station and he has them trained to come to the tune of a dinner bell. When Mr. Walker fills the feeders he rings a bell and the birds fly in from a nearby evergreen plantation for the grain that has been put out for them. George Taputac, a barber and wildlife enthusiast, of Edinboro, R. D., in addition to furnishing the pheasants that come to this feeder grain puts

out sand and grit for them.—District Game Protector, Elmer D. Simpson, Union City, Penna.

He Who Laughs Last

GREENE COUNTY—The following story was told to me by Mr. James Haywood, a cooperator on Farm Game Project #13. While hunting this past buck season, he and his wife were walking up a back road when they noticed another hunter standing ahead on the road looking and looking across to the hillside. When they approached he said "Is that a deer lying over there or is it a log?" Mr. Haywood looked over and saw that it was a deer and that it had a big rack. He thought to himself, "I'll tell this guy its a log and after he leaves I'll shoot my buck." After convincing the hunter it was a log, he started walking up the road. After walking a short distance he stopped, looked some more and finally clapped his hands. This made the deer get up and run up the hillside out of sight. After seeing this, the hunter walked back to Mr. Haywood and said "Hey Buddie! that log we just saw got up and ran up the hill and it had another log with it." Mr. Haywood did not get his buck last year.—District Game Protector Richard L. Graham, Carmichaels, Penna.



HERE'S ANOTHER ONE,
MR. TUCKER!



The Halt, The Lame And The Blind

MONROE COUNTY—Mr. Henry Tucker, Shawnee-on-Delaware, Pa., prominent Monroe County sportsman, is currently running a cafeteria for crippled deer at his Shawnee home. Mr. Tucker has a feeding station for song birds and deer. About 13 deer visit the feeder nightly and among them is a button buck with part of both jaws missing. One doe has a back leg off at the hip; one young doe carries a buckshot wound in the right shoulder. New Jersey is just across the river. A doe with the right front leg off at the first joint and other doe with a broken front leg in the process of healing. The buck with a jaw injury is a result of the hunting season in Pennsylvania. The doe with the buckshot wound of the New Jersey season, and the other cripples were victims of automobiles in the Shawnee area.—District Game Protector John H. Doebling, East Stroudsburg, Penna.

Winter Wanderers

COLUMBIA COUNTY—For many people who have maintained bird feeding stations for our feathered friends, the month of February, 1958, will long be remembered. Many of such people called to inquire concerning the identity of strange birds that appeared for a meal while many others told me of seeing such visitors

as evening, pine and rose-breasted grosbeaks, horned larks, snow buntings, robins and the usual cardinals.—District Game Protector Lewis H. Estep, Berwick, Penna.

Snow Samaritans

LACKAWANNA COUNTY—It certainly has been heartening to see the sportsmen pitch in and come to the help of the creatures of the forest and field following the recent snowstorms. It surprised me how many clubs and individuals dug into their pockets and treasuries and purchased alfalfa, corn and other game foods and waded through the deep snows to distribute this food. Others besieged the various local stores, chain stores and fruit markets and carried away bundles of left-over lettuce, other greens and apples. Others secured permission from landowners and cut saplings in order to furnish food. Since immediately after the storm my telephone has been constantly ringing with offers of assistance and requests for information concerning what might be done. These men who have endeavored to help the birds and animals weather this crisis certainly deserve the name of Sportsmen and Conservationist.—District Game Protector Stephen A. Kish, Avoca, Penna.

Snowbound Scaup

TIOGA COUNTY—On February 20 I went to the Chamberlain home in Knoxville and picked up a duck. This duck had been found in the streets of Knoxville on the previous afternoon by David Chamberlain. I identified this duck as a Greater Scaup, the finest of this species I have ever seen here. The duck was evidently driven off a larger body of water during the severe wind and snowstorms. Probably came from one of the finger lakes in New York State.—District Game Protector Gerald W. Cyphert, Westfield, Penna.



Operation Turkey In The Snow

By Howard Bullock

WHEN late summer and fall field trips indicated a bumper crop of wild turkeys but a negligible supply of food, members of the Canton Explorer Scout Post No. 3, Canton, Pennsylvania, voted unanimously to construct and maintain crib type feeders to help augment the birds' scant winter food supply.

Late spring frosts had ruined the beech-nut and acorn crops and summer drought had caused even berries and seed producing weeds to be scarce. Black cherry pits and maple seeds were available but unlike beech or oak trees that hold their fruit through most of the winter, the cherry and maple drop their fruit when ripe and the first deep snow makes it unavailable.

As word of the intended turkey feeding project spread thru the area the scouts were pleasantly surprised when many conservation-minded folks

offered their help. The Canton Rod and Gun Club purchased lumber for some of the cribs and several farmers donated quantities of corn. Two carpenter-sportsmen, Bob McWilliams and Ira Machmer, drew the plans, helped furnish materials, and supervised the building of the cribs. The Canton Lodge, Loyal Order of Moose, sponsoring organization of the Explorer group, purchased pack-baskets to facilitate the carrying of corn to the feeders, and the local Game Protector, Mr. George Sprankle was most co-operative during all phases of the operation.

Shortly after the close of the 1957 deer season, several flocks of turkeys were feeding at the cribs. A six to eight inch blanket of snow enabled the boys to observe the bird movements as they worked the area near the feeders.

The boys had used the corn

donated by individuals for the initial filling of the feeders and on following weekends they packed additional corn, furnished by Game Protector Sprinkle, to keep the feeders filled. Everything was proceeding as planned—and then it really snowed!

For several days the snow and gale proportion winds left the entire area snowbound. All roads in the section were impassable, railroads and airlines were forced to cease operation temporarily, farmers were forced to dump their milk, a couple of unfortunate rural area residents were forced to stand in the snow during sub-zero weather and watch their homes burn to the ground—no fire companies could reach them. When the blizzard finally diminished, (there are some who say it was worse than the one of '88) the scouts emerged to find that they were now faced with a major feeding problem.

They knew that feeding stations, once established, must be maintained.

Interruption of artificial feeding could result in starvation for many birds. The snow plugged roads—drifts up to 20 feet—and snow conditions of almost undescrivable proportions in the woods were going to make this a rough go for a group of teen age boys. Long walks thru deep snow were inevitable so the Canton Moose Lodge encouraged the boys by buying several pairs of snow shoes (all that were available in area stores) to enable them to visit their feeding stations.

As the deep snow forced game to seek food in open areas; calls began to come to Scout Leaders informing them of small flocks of turkeys and ringnecks that should be fed, so the boys began making wire basket type feeders to take care of these birds.

In the next three weeks the boys, working evenings and weekends, made and with the aid of adult help, distributed over 60 of these feeders.

During the feeding operation—



TYPICAL CORN CREW was composed of Scouter Howard Bullock, Explorers Tom McConnell and Gordon Preston, ready to carry corn to an area where ringnecks have been reported. Any program carried out by boys is bound to include a dog, and "Nance" shown here was a valued member of the team.



WIRE BASKET FEEDER construction is explained by Game Protector George Sprankle, left, to Explorer Bob VavNoy and Scouter Howard Bullock. Dense cover nearby is important in location of the feeder.

which is still in full swing as this report is being made—many gaunt, slab sided deer were seen, some of them so poor that ribs and hip bones seemed to form parts in their hair. Occasionally a dead turkey was found. These were brought in and taken to Game Protector Sprankle for post-mortem examination.

On Sunday, March 2, the boys were distributing corn in the Rock Run headwaters section and found a big tom-turkey so weak from hunger that he was unable to move. They carried him back, placed him in an old brooder house with feed and water and to the surprise of no one, (they're an optimistic bunch) he is recuperating nicely.

The boys know that as soon as the sun gets high; melting the snow, then the buds begin to swell, and skunk cabbages and Jack-in-the-Pulpits start pushing up thru the wet places, the black bears will be coming out of hibernation—angry, mean and hungry.

The bears will undoubtedly locate

the cribs and smash them to bits to get what corn is left in them. Racoons will do a similar job with the wire baskets feeders; so the boys will have a mess of splintered wood and twisted wire to start next year's feeding project.

These boys are busy. Some have paper routes, others have part time jobs in their dad's stores, some are band members, some are active in organizations like the DeMolay, F.F.A., etc. They practically all play basketball and/or football besides having full time jobs trying to get a high school education, but unlike most adult sportsmen, they can find time to carry out a complete game feeding operation. And so, Mr. Sportsman, come next November when you blot out the head of an old Tom turkey with the head of your shotgun, or when old "Sport" comes carrying a ring-necked rooster to you—who knows—maybe you'll be getting your bird through the courtesy of the Canton Explorer Post No. 3, Canton, Pennsylvania.



Brief Reunion

By Oliver H. Wilson

WITH wild honks and cackles the V-shaped formation of Canadian geese circled low over the tree-tops and slid to a splashing halt. Once again on their way north for the summer, the web-footed migrants had chosen the upper reaches of the Delaware Valley as a mid-way stopover. And they were welcome.

Townsfolk from the twin boroughs of Stroudsburg and East Stroudsburg, Pa., came by the carloads to the edge of Broadheads Creek, to enjoy the brief reunion. For their part, the birds put on a show that delighted young and old alike. Because their legs are longer and placed closer to the middle of their bodies, they are better able to get about overland than their near relatives the duck and swan. For several hours they paraded through the grove of trees or exhibited their aquatic skill. Taking off and landing on the water like skiers enjoying their sport, they proceeded to demonstrate their special abilities.

As word got about, hosts of camera fans blossomed out with everything from pin-hole cameras to 4x5 Graphics. And the geese were very patient, considering those same hands

that held cameras might soon exchange them for guns. But good troopers that they were, the show went on.

Of the thirteen kinds of wild geese living in the United States and Canada, the Canadian Goose is the best known. With its broad white band across throat and cheeks, it is a familiar sight from Labrador and the Arctic Ocean on the north to Mexico on the south.

Making their nests on low mounds in a marsh, they lay from three to ten white eggs. Wild goose eggs are sometimes found and put under domestic hens, for hatching. The eggs are so large a hen can only cover three. Young wild geese are amusing in a barnyard with their bold manners.

As for the visitors to the Delaware Valley, after a few hours rest they departed as they had come, honking and cackling for dear life.

In the fall, when leaves on the trees have been edged with scarlet and gold, when rime ice circles the ponds, and frost turns meadows into fairylands, we'll be scanning the sky for a return engagement. And we'll be waiting with our cameras.

Wildlife Food And Cover

By The Mile

By W. C. Richter

IN recent years development of natural gas fields and the expansion of electrification facilities have resulted in the construction of hundreds of miles of rights-of-way throughout northcentral Pennsylvania. The creation of these rights-of-way through the vast forested regions of this portion of the State has benefited the wildlife living within this area.

One significant benefit resulting from the opening up of these forested regions has been the opportunity for partial redevelopment of many shrub species which had largely disappeared because of over-utilization by deer and the overshadowing effect of maturing forest trees.

Nature has generally taken advantage of this man-made opportunity to repropagate many shrub species on and along the edges of these rights-of-way. This redevelopment of shrubs helps provide both food and cover for various game species. Once these shrubs have reached bearing age, the opening or edge created by a right-of-way becomes extremely important for the production of wildlife food.

For the past four years a study has been underway to determine the importance of these rights-of-way edges for the production of game food by the various shrub species occurring along specific sections of selected





rights-of-way. The production record of shrubs along the edge was compared with the same shrubs occurring in the forest adjacent to the particular section of right-of-way on which they appeared. Sections of both pipe lines and power lines were included in the study.

The Table below shows the comparison of the average percentage production for four years for the various species of shrubs along the right-of-way edge and in the adjacent forest. These ratings are based on the ratio of the actual production to the potential production of the individual shrubs.

Percentage Production Along the Right-of-Way Edge Compared with that of the Adjacent Forest

Species	R /W Edge	Adjacent Forest
Flowering Dogwood	41%	15%
Juneberry	12%	4%
Witch Hazel	35%	4%
Hawthorn	33%	4%
Scrub Oak	14%	3%
Sassafras	34%	11%

WILMER C. RICHTER is a wildlife biologist in the Game Commission's Wildlife Research Division.

It is obvious from the figures in this Table that greater production occurred along the right-of-way edge than under the forest canopy. Even though production is greater along the right-of-way edge than in the adjacent forest, the shrubs occurring along these edges do not realize their full potential because of a number of factors. Among these are weather conditions (frost, rainfall, etc.), direction and width of the right-of-way, height of surrounding trees, and often the location of the shrubs in relation to these trees.

Observations tend to emphasize the fact that complete release of the shrubs from the shading effect of overshadowing growth is a must, if maximum production is to be obtained.

Individual sportsmen or sportsmen's organizations should note this opportunity to make a valuable contribution toward increased production of game foods. There are opportunities in many areas of the state for sportsmen to cut overshadowing or competing growths to release the desired shrubs and trees from competition to sunlight. This would permit the released trees and shrubs to produce more of their potential crop of game foods.



CONSERVATION NEWS



PENNSYLVANIA TO HOST 16TH NATIONAL PLOWING CONTEST; BIGGEST FARM EXPOSITION SET FOR HERSHEY IN AUGUST

The 16th United States "World Series of Agriculture"—the National Plowing Contest and Conservation Exposition—has been scheduled for Hershey, Pennsylvania on August 21-22. This will be the first event of its kind held east of Ohio and the first ever held on a single farm operation—the 10,000 acre Hershey Farms provided through the cooperation of the Hershey Estates. Champion plowmen from as many as 15 states are expected to compete for the right to represent the United States in the 1959 World Championship Plowing Matches to be held in northern Ireland. The Pennsylvania State Plowing Contest will be held on Tuesday, August 19 on the Hershey Farms.

The two-day agricultural contest and exposition is officially sanctioned by the National Association of Soil Conservation Districts. It is expected to attract more than 100,000 visitors to the Keystone State and will coincide in part with the Pennsylvania Dutch Days which start in Hershey on August 21.

Under the chairmanship of L. H. Bull, deputy state secretary of agriculture, plans call for a 25 acre tent city where manufacturers of farm machinery and equipment will display the latest in agricultural designs. Educational exhibits will be provided in an adjacent area by the Pennsylvania State University, State Soil Conservation Commission, State Department of Forests and Waters,

State Department of Highways, Game and Fish Commissions, Farmers Home Administration, and other conservation and agriculture agencies.

Plans include the actual building of several farm ponds, contour strips, waterways, tile drainage, tree planting, wildlife shrub planting, woodland border cuttings for wildlife, forest management, diversion terracing, pasture improvement, and other conservation measures. Visitors will be taken to these demonstrations by wagon trains pulled by tractors over a route more than a mile long.

A "Queen of the Furrow" will be chosen from finalists and crowned on Friday or Saturday preceding the Exposition. The contest is open to single girls with rural background between the ages of 16 and 21. They will be judged on the basis of personality, poise and natural attractiveness.

In other highlights of the affair, the 5th Annual Supreme Championship Trials of the North American Sheep Dog Society, featuring as many as 25 regional winners, will be conducted. All dogs in this unique event are registered Border Collies. A Plowman's Banquet featuring barbecued chicken will be served all entrants in the plowing contests and their wives on the night of August 21. Bus and airplane tours at moderate cost will be provided so that visitors can see established soil conservation areas in the nearby Pennsylvania Dutch country.

Abandoned Cubs Go From Poconos to Philadelphia

On March 6, a timber cutter in Wayne County dropped a tree across a fallen hemlock under which a female black bear was hibernating with her three cubs, 4 or 5 weeks of age. The crash roused the mother bear and frightened her so badly she left her den and did not return. As requested by the area Game Commission Supervisor, Carl Stainbrook, the woodsman took the abandoned cubs to Game Protector Frederick Weigelt, of Honesdale, whose wife and children fed and cared for the orphans the next three days. Then the little balls of fur were turned over to Game Protector Norman Forche, who placed them in the hands of Game Protector A. J. Kriefski, this officer being on his way to the Northeast Division office at Forty Fort. The job of caring for the cubs was then inherited by a nearby Deputy's wife, Mrs. Er-

nest Harrison. But the chain of events was not yet finished.

On March 11, a photograph of Game Protector Weigelt and the three little bears appeared in a number of newspapers including the *Philadelphia Inquirer*. The Director of the Zoological Society of Philadelphia saw the photo and immediately phoned Nicholas Biddle, a member of the Game Commission, to ask that the cubs be brought to the Children's Zoo. Learning this could be done Colonel Biddle complied.

On the following day Game Protector Stephen Kish of Lackawanna County, delivered the little fellows to their new home at the Philadelphia Zoo. The cubs were so photogenic and newsworthy they were televised over two Philadelphia stations, undoubtedly to the delight of many persons who otherwise probably would never see the very young of the bruin family.

THREE LITTLE BEARS find plenty to eat after their arrival at the Philadelphia Zoo. Helping administer the welcome meal are the Zoo's Head Keeper, Colonel Nicholas Biddle, Member of the Game Commission who arranged for their new home after their mother abandoned them in Wayne County, and Fred Ulmer, Curator of Mammals.

Photo courtesy Zoological Society of Philadelphia





U. S. Army Photo

WINTER FEEDING of wildlife following extremely heavy spring snowstorms got a helping hand from personnel of the Tobyhanna Signal Depot in northeastern Pennsylvania. Depot Commander Colonel Clifford A. Poutre and some of his aides took to the air in a plane loaded with apples and corn for drops in nearby areas. Colonel Poutre, left, acts as spotter as SP2 Al Cieri of the 510th Signal Company drops the apples.

Deer Population Remains Constant

The remark, "It's fortunate the harvest of deer last fall was large," was often heard in Pennsylvania in recent weeks. A good observation because, had this harvest not occurred the winter kill of the white-tails would have been much larger. Many deer, which provide wonderful sport and delicious food, would otherwise have suffered a lingering death from malnutrition.

The season take of deer in 1957, reported by hunters as 105,000, just approaches the number of fawns produced last year. Hence the cropping by hunters caused no appreciable reduction in the breeding stock. Obviously the numbers harvested each year, by all causes, can equal the

number of fawns added to the herd without causing a herd reduction.

Here are some figures that provide food for thought: In Pennsylvania during January and February of 1958 the number of deer that were killed for crop damage was (61), by vehicles (744) and in miscellaneous accidents, including deaths by dogs, was (446), making a total of 1251. In the comparative period in early 1956 the total deer deaths by the same causes was 823. In both cases the animals were killed following a year in which antlered and antlerless deer were hunted. This is only one "barometer," but it certainly shows the Pennsylvania herd has not been reduced alarmingly. It also indicates that at least as many deer remained in the coverts following the last deer season as after the similar one in 1955.



Burd S. McGinnes



Dale E. Sheffer

Two New Game Biologists Join Commission's Research Staff

Burd S. McGinnes and Dale E. Sheffer, both native Pennsylvanians and graduates of Pennsylvania State University, have been employed by the Game Commission as game biologists in the Wildlife Research Division. McGinnes is a native of Pittsburgh and is a graduate of Coraopolis High School. He is a graduate of Pennsylvania State University, class of '48 with a bachelor's degree in forestry. Mr. McGinnes earned his master's degree in wildlife management at Penn State in 1948 and recently completed requirements for a Doctorate in Wildlife Management at Virginia Polytechnic Institute. He has been employed by the Game Commission as project leader in charge of a P-R research study evaluating habitat development for wildlife, replacing Glenn L. Bowers who was promoted to Chief of Wildlife Research. McGinnis is married and has one son.

Sheffer is a native of Gettysburg. He received his bachelor's degree in zoology from Pennsylvania State University in 1951 and a master's degree in wildlife management in 1952. He has previously worked for the Maryland Game and Inland Fish Commission as a wildlife management supervisor. Sheffer has been assigned to a research study on wild turkeys, replacing Harvey A. Roberts who resigned voluntarily last October to take a position with the Pennsylvania Motor Federation in Harrisburg.

FOOD AND COVER BOOKLET

The cost-free booklet "FOOD AND COVER FOR FARM WILDLIFE," published by the Game Commission early in 1953 and revised in January of 1957, was so widely accepted the second edition was exhausted last fall.

This complete guide is again available to farmers, sportsmen and other practical game managers who wish to provide the necessities for an abundant small game supply. The recent edition appropriately comes when there is time to make plans before spring planting. FOOD AND COVER FOR FARM WILDLIFE is available from the Commission's Harrisburg headquarters or the agency's field division offices.



Photo by Leonard Lee Rue

Commission Research Biologists Studying Snowshoe Rabbit Areas

Early in March the Game Commission released 135 snowshoe rabbits (varying hares) received from New Brunswick, Canada. In 1957, winter shipments from the same source brought 500 of the animals to this state. In 1956 the number was 137.

Experimental releases of the imports were largely made in north-central and northeastern county areas which appeared favorable to the hares but which supported none at the time. These localities were too far removed from present native sources to hope for natural re-establishment of the animals.

Commission research biologists report some success at a few of the liberation sites, but advise it is still too early to draw reliable conclusions. In the final analysis, should results prove satisfactory there are other sites for releases which may extend the present range occupied by snowshoe rabbits in Pennsylvania.

If and when deer in this state are brought into numbers compatible with their food supply, conifers which provide excellent cover for the snow-

shoes can be expected to grow and provide one type of environment conducive to hare survival. Cut-over timber areas, particularly near stands of evergreens, would be the ideal place for liberated hares to thrive. But the deer browse the new seedlings and shoots so close they do not have the opportunity to grow and produce this habitat requirement.

The decline in the number of snowshoe rabbits in Pennsylvania has largely been caused by maturing forests and lack of ground cover, the latter attributed to the deer. Another factor has been the several "open" winters of late years. On bare ground the normally protective white winter coat of the varying hare becomes its downfall. Hunters then find them easy to see. On the dark background, lacking much protective cover, the hares fall pray, also, to predators that might otherwise overlook them in snow because of their camouflage winter coat.

Studies in New York State indicate that in areas where the snowshoe rabbit is "just hanging on," little or no value has been found in restocking the "white rabbit."



PENNSYLVANIA PUBLIC RELATIONS SOCIETY president Walter Roos, left, presents the first place award in magazine division to Leo A. Luttringer, Game Commission staff officer, as H. Eugene Goodwin, head of the school of journalism, Pennsylvania State University, looks on. Commission films or movies placed in five divisions of the statewide contest sponsored by the Society.

Commission's I & E Program Recognized By Pennsylvania Public Relations Society

The Game Commission recently won the blue ribbon or placed in five divisions of a statewide contest sponsored by the Pennsylvania Public Relations Society. The awards, for entries in the information-education field, were for excellence of magazine format, motion picture, newspaper format, organization booklet, and special booklet. Several Commonwealth agencies and numerous service and industrial organizations in Pennsylvania competed for these recognitions.

PENNSYLVANIA GAME NEWS took first prize in the magazine division. The motion picture film *The Eastern Wild Turkey In Pennsylvania* was the wildlife agency's other blue ribbon winner. The Game Commission newsletter was awarded second place in the newspaper format competition.

Among the booklets on organizations Policies And Programs Of The Game Commission also placed second. Pennsylvania Trapping And Predator Control Methods won third place in the special booklet classification.

The March 28 Evening News, Harrisburg, had this to say about the awards; "Honors for public relations excellence in 1957 were presented last night at the monthly meeting of the Pennsylvania Public Relations Society.

"Pennsylvania State University School of Journalism officials presented awards in the 1957 Information Fair sponsored by the Society. Faculty members at Penn State judged the 94 entries in the third annual contest. H. Eugene Goodwin, head of the journalism school faculty and John D. Vairo, public relations instructor, explained why the winning entries were selected. Vairo was chairman of the six-member group which judged the contest."

1957 PENNSYLVANIA HUNTING SEASON WAS SAFER; LESS FATALITIES LAST YEAR SET NEW LOW RECORD

The 14 fatal shootings in Pennsylvania, caused during 1957 by guns in use while hunting wild game and predators, is an encouragingly low number, particularly in view of the fact hunter numbers increased. Fourteen is less than half the total for 1956 and is the fewest for any year since 1915, the year the Game Commission began recording all injuries and deaths to humans attributable to firearms while hunting. But the seriousness of life so lost is not minimized. It is most regrettable, and it places a blemish on the record of a fine American sport no matter how low the total.

A study of events bearing on the mortalities is enlightening, though it seems to fall into a rather familiar pattern. In Pennsylvania last year: 2 self-caused deaths were due to the accidental discharge of a gun in the hands of the victim; 11 of the 14 fatalities were persons 21 years of age or older; the instances in which the offender's report read, "did not see victim in line of fire" was 7, the highest of any category; 3 persons were killed in mistake for game; one nimrod used his gun as a club to rout game, in his final earthly act; 9 of the casualties met their end while visibility was good; one hunter who slipped and fell while his gun was ready to fire caused a death. None of the fatalities was caused by an arrow.

Compared to the shotgun, the rifle was a 12 to 2 offender in the fatality column last year. Eight was the highest number of persons mortally wounded while hunting any one animal, and occurred in hunting deer. Four came about while upland small game was the quarry, one was listed in bear hunting and one was caused by a woodchuck hunter. All of the fatalities occurred during the open game season, which is very unusual.

However, Pennsylvania law requires reports of all human casualties by sporting arms in the field at any time, whether the shootings occur while hunting birds or animals classed as game or predators, in season or out during the entire year.

The total of non-fatals due to gun or bow during 1957 stands at 489—about average for one year's injuries, which are anywhere from negligible to serious. Again, and unusually, all of the injuries occurred in the open game season. The shotgun accounted for 376 of them (in addition to 2 of the fatalities). It is normal to find the shotgun the principal offender in the "Injured" column. Other firearms that caused injuries afield last year were: rifle, 84; pistol, 14; and bow, 15.

As usual, field investigations disclosed that most of the hunter-firearm "accidents" in 1957 could have been prevented. Often they were the result of: 1. Lack of firearms training or knowledge. 2. Non-practice of the common sense rules of safe gun handling while hunting. 3. Uncontrolled emotions, because of which the excitement or optical illusion of the moment resulted in quick, erroneous shooting involving humans. 4. Greed for game or the desire to prove ability as a crack shot. 5. Failing to wear bright, identifying hunting clothing.

So many elements contribute toward hunter casualties no one is qualified to prophesy that succeeding years will bring the zero goal closer. Here is a factor recognized by those who know the part played by chance in many a near mishap or an actual gun casualty: The difference between a fatal or a nonfatal shooting, many times, is only a slight change in muzzle direction at the time the gun is discharged.

COMMONWEALTH OF PENNSYLVANIA—PENNSYLVANIA GAME COMMISSION

Human Gunfire Hunting Casualties in Pennsylvania for 1957

	FATAL		NON-FATAL		TOTAL	
	No.	Percent	No.	Percent	No.	Percent
TOTAL CASUALTIES						
Self-inflicted	2	14.3%	85	17.4%	87	17.3%
Inflicted by others	12	85.7%	404	82.6%	416	82.7%
SEASONAL PERIOD						
Open Season	14	100.0%	489	100.0%	503	100.0%
Close Season	0	0.0%	0	0.0%	0	0.0%
AGES OF VICTIMS						
Under 12 years of age	0	0.0%	15	3.1%	15	3.0%
12 to 16 years of age	3	21.4%	55	11.2%	58	11.5%
16 to 21 years of age	2	14.3%	78	16.0%	80	15.9%
21 years of age and over	9	64.3%	332	67.9%	341	67.8%
Age not reported	0	0.0%	9	1.8%	9	1.8%
AGES OF PERSONS INFLECTING INJURY						
12 to 16 years of age	1	8.3%	27	6.7%	28	6.7%
16 to 21 years of age	0	0%	48	11.9%	48	11.6%
21 years of age and over	8	66.7%	223	55.2%	231	55.5%
Age not reported	3	25.0%	106	26.2%	109	26.2%
BIRD OR ANIMAL HUNTED						
Deer	8	57.2%	74	15.2%	82	16.3%
Bear	1	7.1%	1	2%	2	4%
Upland Small Game	4	28.6%	380	77.7%	384	76.3%
Woodchucks	1	7.1%	22	4.5%	23	4.6%
Migratory Birds	0	0%	2	4%	2	4%
Furbearers	0	0%	0	0%	0	0%
Predators	0	0%	7	1.4%	7	1.4%
Unprotected species	0	0%	3	6%	3	6%
FIREARMS USED						
Shotgun	2	14.3%	376	76.9%	378	75.1%
Rifle	12	85.7%	84	17.2%	96	19.1%
Pistol	0	0%	14	2.9%	14	2.8%
Bow and Arrow	0	0%	15	3.0%	15	3.0%
CASUALTY CAUSES						
Gun placed in dangerous position	0	0%	4	8%	4	8%
Accidental gun discharge in hands of hunter	2	14.3%	85	17.4%	87	17.3%
Ricochet or stray bullet	0	0%	145	29.7%	145	28.8%
Did not see victim in line of fire	7	50.0%	185	37.8%	192	38.2%
Hunter slipped and fell (with safety off)	1	7.1%	32	6.5%	33	6.6%
Hunter dropped gun	0	0%	14	2.9%	14	2.8%
Shot in mistake for game	3	21.5%	17	3.5%	20	3.9%
Firearms exploded	0	0%	6	1.2%	6	1.2%
Using gun as a club	1	7.1%	1	2%	2	4%
Unknown	0	0%	0	0%	0	0%
WHERE CASUALTIES OCCURRED						
Fields	1	7.1%	135	27.6%	136	27.0%
Brush	2	14.3%	142	29.0%	144	28.6%
Open woodland	5	35.7%	81	16.6%	86	17.1%
Dense woodland	4	28.6%	94	19.2%	98	19.5%
Water	0	0%	2	4%	2	4%
Conveyance	0	0%	1	2%	1	2%
Camp	0	0%	3	6%	3	6%
Woods road or public highway	2	14.3%	31	6.4%	33	6.6%
WEATHER CONDITIONS						
Daylight	4	28.6%	91	18.6%	95	18.9%
Clear	5	35.7%	267	54.6%	272	54.1%
Raining	0	0%	14	2.9%	14	2.8%
Snowing	2	14.3%	6	1.2%	8	1.6%
Fog	0	0%	3	6%	3	6%
Cloudy	0	0%	97	19.9%	97	19.3%
Dusk	3	21.4%	7	1.4%	10	1.9%
Dark	0	0%	4	8%	4	8%

SUMMARY OF ALL CLASSES OF 1957 SHOOTING CASUALTIES

FATAL 14—2.8% NON-FATAL 489—97.2% TOTAL 503—100%

One Fatal accident for every 68,412 licenses. One Non-Fatal accident for every 1,959 licenses.
Reports to date, subject to final audit, indicate 957,763 hunting licenses were issued in 1957.

1957 HUNTING CASUALTIES COMPARED WITH PREVIOUS TEN-YEAR PERIOD

	1947	1948	1949	1950	1951	1951	1953	1954	1955	1956	Total 10 Yr. Av.	1957
FATAL	29	23	25	16	25	24	34	21	19	30	246(A)	14
NON-FATAL ..	426	418	453	449	386	362	509	510	528	446	4487(B)	489

(A) Of this total 29.3% were self-inflicted and 70.7% inflicted by others.

(B) Of this total 16.2% were self-inflicted and 83.8% inflicted by others.

EFFECT WEARING OF SAFETY COLORED CLOTHING HAD ON CASUALTY TOLL

Number of persons shot while hunting	503
Of this total, those wearing no safety colored clothing numbered	132

Number of hunting-shooting victims who wore some safety colored clothing 371

In the following cases, the wearing of safety colored clothing, or the failure to wear such clothing, would not have influenced the result:

1. Casualties self-inflicted
2. Persons shot by other hunters through the unintentional discharge of firearms
3. Casualties caused by ricochet or stray shot
4. Victims hit while completely hidden from view of shooters

Casualties described in numbers 1, 2, 3 and 4 total 344

Net number of cases in which safety colored clothing worn had no apparent effect 27

NOTE: No one will ever know the number of hunters who returned safe only because safety colored clothing warned another before he pulled the trigger.



Cooperative Fun

By LeRoy F. "Shorty" Manning

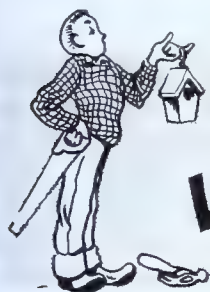
These photos were taken during the 8th Annual Farmer-Sportsmen Banquet of the Delaware County Field and Stream Association held March 17 in the Wild Goose Inn at Wa Wa, Delaware County. We can thank our farmer friends for the privilege of hunting or fishing on their property but we also believe more should be done to let them know how much we appreciate their cooperation.

Every landowner in Delaware County that permits public hunting or fishing on his land receives a letter inviting him or her to attend this yearly affair, along with a self-addressed card for reply. The Banquet is purposely planned for the middle of March because that is their best time to join us for an evening of

fun and fellowship. It is a real pleasure to be able to talk with many of these landowners and to see them meet other landowners that otherwise they might not see during the entire season. For entertainment there are generally two or three short speeches, followed by the best show obtainable. Each guest has a name card that bears a number and to climax the evening a prize drawing for everyone is held. During the dinner a club representative is placed at each table to ask if there are any complaints or suggestions in which the Field and Stream Association might be able to further help.

Sportsmen, if your club doesn't have a night such as this, you are missing a golden opportunity for real enjoyment and for doing a good deed





OUTDOOR FUN WITH A FUTURE



Bird Watching With A Purpose

By Ted S. Pettit

BIRD watching is one of the oldest, but still the most popular, of the nature hobbies. Over the years there have been thousands of professional and amateur naturalists whose chief interest has been birds, and their contributions to our knowledge have been great. There have been more popular books published on birds probably than on any other form of animal life, and thousands of scientific papers. But, in spite of all this there are still many things not known about some of our more common birds, not to mention some of the lesser known species.

There is a good reason for this lack of knowledge. Outside of universities that have departments on ornithology, museums and a very few state or federal agencies, there is a limited demand for professional ornithologists. There are thousands of professional biologists now employed in this country by state, federal and private conservation agencies. But their research and management practices are confined to those game fish, birds or mammals sought by sportsmen. Any professional interest in songbirds is secondary.

Consequently, for many years now much of the scientific knowledge of songbirds and their life histories has been contributed by the amateur na-

turalist—the amateur bird watcher. Slowly but surely over the years, these amateurs have been adding to scientific knowledge of birds and many of them have been doing a tremendous job. But more needs to be done.

One problem is due to the fact that many bird watchers go no further than mere identification. They go on bird hikes and make lists of what they see. They concentrate on trying to find rarities, rather than trying to find out more about a few common birds and how they live and why they act as they do. If all of the effort spent on running up lists of the most species were concentrated on discovering unknown facts about common birds, we would know much more now than we do. And many of these unknowns could well have applications to management of game species as well as to contribution to knowledge of songbirds.

Let's take an example. Frequently we read in newspapers these days that new insecticides used to protect agricultural crops and forest trees are deadly to birds. A few isolated studies have been made that apparently bear out these statements. But do they really? Do we know that a heavy application of spray to a certain area causes a decrease in certain birds or all birds? Can we prove it?

Backyard Bird Watching



If for example, there is a marked decrease in certain species in the three million acres of forest land in New Jersey, New York and Pennsylvania sprayed last spring to control the gypsy moth, is it due to the insecticide? Might it not be due as much to the abnormally cold winter in the south where many of these birds spend their winter?

It is known that some species of birds that breed in a given area in the north, winter together in a given area in the south. Suppose that many of the birds that normally nest in the corner of New Jersey, New York and Pennsylvania were hard hit by the cold winter along the Gulf and died down there. There would be fewer coming back to nest this spring. But, because of the widespread spray program last year, it might be concluded that the smaller number of birds was due to death from DDT rather than death from cold. That's a possibility. Amateur bird watchers over several years keeping accurate records, could help supply the answer—if the question arises.

Much can be learned about birds right in a suburban or rural backyard, along a suburban street, in a farm field or a farm woodlot. Some of the things outlined here to watch for, are known now. Others are not. But, in the process of watching for these things, unknown facts may be discovered or certain doubtful information may be confirmed. Generally, it takes many observations in different places, by different people, to come up with a definite conclusion about one bird and its habits.

Here's an example. In our suburban yard, for three winters we have had one pair of cardinals. In spring, these birds nest not too far away. We do not know whether it is the same pair that has visited our feeder for three years or not, but we have had only one female and one male.

Whenever other cardinals come to the feeder regardless of whether they are male or female, the first pair drives them away. Several times from November to March, three to five additional cardinals have come to our yard to feed. But, once the resident pair returns, they immediately drive the new birds away.

The indication is that these birds have a feeding territory and fight to keep it for their own. Apparently they have been successful, but is this the reasonable conclusion?

In other yards, we have seen eight to fifteen cardinals feeding together. In woods and hedgerows, we have seen up to twenty cardinals—males and females—feeding together. But, what is different about our yard? Why do the cardinals here object to others?

Someday we will try to find out. We will band the first two for positive identification and start from there. But, in the meantime we have an interesting question.

Records

One thing that any amateur bird watcher can do and should do, is keep accurate records of what he sees.

Starting right now, he can keep a list of birds as he sees them for the first time this spring. But the list should include more than just a list of species. It should include the number of a particular species seen on a particular day and a note on the sex of the birds.

With some birds, redwings for example, the males arrive first. The females arrive at a later date. With most birds, one or two will be seen first then more and more until a peak is reached. Then the number will drop off as the birds move on north or spread out over their breeding range.

Several year's worth of records of this sort turn up interesting information when put down in chart form. They also indicate relative abundance or scarcity of numbers of a particular species from one year to the next.

But as birds arrive, here is something else to watch for and record. Do the males set up territories as soon as they arrive, or do they wait until the female arrives from the south?

Robins are common backyard birds that set up territories around their nests and defend that territory against other robins.

Did you every see a robin fly at a window time and time again? Have you read newspaper stories about "crazy robins" attacking automobile hubcaps or other shiny objects? These stories appear in papers regularly and are written in a humorous way. Usually they reflect the ignorance of the writer, for these birds are not "crazy." They see their own reflection in window glass or hubcaps and thinking it is another robin, try to drive it away.

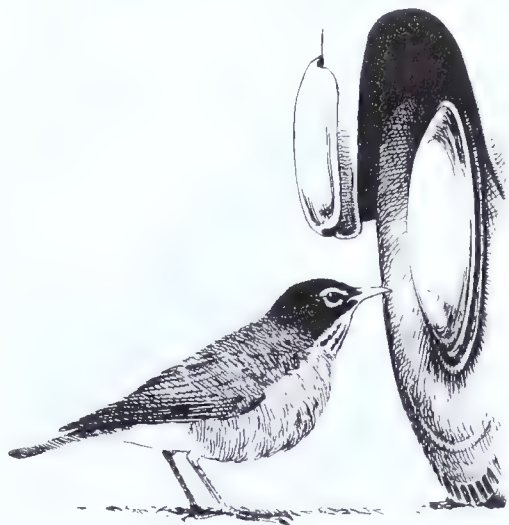
A very interesting backyard project is an attempt to discover the size and boundaries of a robin's territory.

Sometimes this can be done by observation—by watching to see the point at which one robin will stop trying to drive another away. But, there is another method that is fun to try.

Get a small mirror, about 8 x 10 inches in a dime store. Fasten it to a board so that it stands upright on the board when the board is flat on the ground. Tie a long string to the board so when you pull the string the board will slide along the ground carrying the mirror with it.

Place this gadget on the ground near a robin's nest and wait until the robin discovers it. When he tries to drive away his own reflection, move the mirror back slowly until it no longer interests the bird. Then try the same stunt moving the mirror in the other direction. In a week or two it is reasonably easy to determine the boundaries of that bird's territory—the area around his nest that he defends against other robins.

But when does the robin show the greatest degree of territorial defense? Is it when he first arrives? Is it when the female arrives? Is it when nest building first starts? Is it when eggs are being incubated? Is it when young are in the nest? If the robins nest a second time, is there the same degree



of territorial defense as the first time?

A robin is only an example. The same information may be obtained for other birds that nest in backyards or in nearby parks, fields or woods—jays, song sparrows, mourning doves, flickers or thrushes.

Robins defend their nesting territories against other robins. Other birds do too. But many times these birds have to range outside their territories to feed. How far will they go to find food for themselves or their young? What happens if they try to feed within the territory of another bird?

Do these birds with strong territorial instincts have common feeding grounds? Are there places where several will feed without driving each other away? Watch robins in your neighborhood and try to find out some of these answers.

How far will orioles or robins fly to find nesting materials? These birds frequently use string or pieces of colored yarn to build nests, if they can find these materials. Many times short pieces of string or yarn spread over shrubs or placed on the grass will attract birds looking for nesting materials. But how far will birds range for these materials? Try it and see for yourself. How many different kinds of birds will pick up string or



yarn? Does color make any difference? Will they go for red or blue as quickly as white, green or yellow?

Here are some other things to watch for—both with backyard birds and birds found in fields or woods.

Watch a nest from a blind or other point of concealment. If there are eggs in the nest, find out if both sexes incubate eggs. Do the male and female take turns? How much time does each spend on the nest? What does the male do while the female is on the nest? When one bird leaves the nest and later returns, does it fly directly to the nest or does it perch for a while nearby then sneak in by a roundabout way? Does it always return to the nest in the same way, or does it take different routes? Does it approach the nest from above, below or from the side? What happens if another bird perches in the same tree or shrub or nearby? Does the nesting bird show alarm, or does it try to drive the other bird away?

Does the male have a favorite perch where he invariably sits, or does he use different perches? Does he sing while there are eggs in the nest? If so, at what times of day? Is there any regular patterns of time that he sings? Does he sing when there are other birds nearby?

When the eggs hatch, watch the adults feeding the young birds. Watch the nest for an hour or so at different times of day for several days. Do both



adults feed the young, or only one of them? Do both adults go after food at the same time or does one always stay near the nest? How many times in an hour are the young fed? Does the frequency of feeding vary at different hours, or do the adults or one adult feed the young more or less continuously all day long?

Can you tell what food the adults bring back to the young? Is it mostly insects or fruit or a combination of the two? Do the adults carry anything away from the nest when they leave?

How do the young respond when the adults return with food? Do they always respond in the same way? Do the adults ever seem to urge the young to take food? How do they do it?

Most or all of these questions can be answered by a careful observer watching a nest—any nest. In the process of these observations, many interesting things can be learned about birds—some things unknown before, depending upon the bird or some things about which very little has been known before.

But, your interest may lie in another direction. Perhaps you are more interested in the relationship between birds and plants—birds and the natural habitat in which they nest.

Here is what you might want to find out. Do birds of the same species always nest in the same kind of area? What kind of place do they prefer generally? Can you come up with a general rule as to birds you can reasonably expect to find in an open field, for example, a hedgerow, a multiflora fence, a dense woods?

Once a few hundred years ago, Pennsylvania was covered with trees—oaks, maples, birch, chestnuts, hickories and in some places, hemlocks and other conifers. But lumbering, farming, fires and other activities of man, changed the natural environment to what we know today. Along with these changes came changes in bird life—many different changes in

fact. In some places now, old fields are reverting to forests and as the fields grow up, and trees appear, bird life changes.

If we could observe a plowed field that was then left untouched for a hundred years or so, here is what we would see.

During the first few years, annual and then perennial weeds would grow. As the soil became conditioned, some trees would then get started—aspens, birches, sumac and sassafras for example. In a few more years, maple might come in and still later on, oaks, beech and hickories. Finally, these trees would grow, shade the ground, and remain growing, reseeding themselves. In some places, hemlocks might grow too, along with pine. But in the end, the once open field would again be dense forest as it was before the white man came here.

Take some field trips this spring to observe birds—but don't stop with running up lists. Make notes on where you see birds nesting—the kind of area, the kind of plant life that is dominant, the kind of natural environment. Start now to keep records that you can add to in future years.

Read "A Guide to Bird Watching" by Dr. Joseph J. Hickey, published by Oxford University Press. Pick out a particular bird watching project and follow it through for a year or more. Not only is it fun right now, but you may discover something not known by anyone about one bird or many birds.





Classification And Handicap

By Tom Forbes

Friendly competition is the life-blood of any sport. An individual may attempt to shoot a possible on a rifle range or play against par on the local golf course, but the companionship of fellow enthusiasts adds pleasure to any sport, including archery.

To provide a base on which archers may compete on an equitable basis, standards have been set up by the National Field Archery Association for the construction of Field Roving Courses. Fourteen targets comprise a unit on the field course and the total yardage is 551 yards. There are four 24-inch diameter targets, five 18-inch,

four 12-inch, and one 6-inch diameter target in each unit. The 24-inch diameter targets are placed at 55, 60, 65, and 80 yards respectively; the 18-inch targets at 35, 40, 45, and 50 yards; the 12-inch targets at 15, 20, 25, and 30 yards; and the 6-inch target at 35 feet. These distances may be varied by five percent either one way or the other, but if a certain distance is increased by 5% then the distance to another target must be reduced so that the total yardage for the course remains the same. On eleven of the targets all four arrows are shot from the same shooting distance. On the 35 yard shot at the 18-inch face there are four shooting positions, each 35 yards from the target. The 80-yard shot at the 24-inch target, one 45-yard shot at an 18-inch target and the 35-foot shot at the 6-inch targets are known as "walk-ups". On each of these targets four shooting stakes are used. The first stake is



placed at the maximum distance and each succeeding stake closer to the target. On ten of the targets all four arrows are shot from the same shooting position. There is no prescribed order in which the targets must be constructed on a field course. Generally speaking the terrain will govern the layout of the targets and the order in which they will be shot.

This is the time of the year when the new crop of archers will shoot their club field course for the first time. Perhaps they joined the club during the winter months and learned how to shoot on an indoor range. They have no knowledge of the meaning of the terms "Classification" and "Handicap" or their purpose. They are unaware that a system has been developed that permits competition among all archers regardless of their ability. In the classification system archers are divided into five classes for men and four classes for women. Each archer competes with other archers in his class and awards are made in each class. However an archer entered in any class in a tourna-

ment who turns in the day's highest score for the tournament wins his own class award and in addition the award in the open class. Formerly, Instinctive and Free-Style archers shot in separate classes. This requires duplicate bookkeeping and places a considerable burden on the classification committee. It also requires a large expenditure for class awards. It has been proven beyond doubt that free-style and instinctive archers compete on equal terms on a field course and an archer's ability is the measure of his success and not his method of shooting. The older clubs recognize this fact and have eliminated the two divisions and all archers compete on equal terms regardless of their method of shooting.

In a classification shoot in spite of the awards made in each class there are numbers of club members who stand no chance of winning a class award. A person is placed in the "archer" class if his average score is 88 to 158 and for women 53 to 123 inclusive. A chap with an 88 average is not very likely to win over one



whose average is 158, although they are both in the "archer class".

The "Handicap" system has been devised so that every club member will have an equal opportunity of winning. Classifying and handicapping archers is done by the archer's home club, and is based on competitive twenty eight target scores. These scores may be shot in tournaments or in competition with at least two other archers. In the latter event the score card must be signed by at least one witness. The *first* handicap is compiled when the archer has submitted four recent competitive 28-target scores. The first handicap is computed as follows: Select the three highest scores, total and divide by 3. This is the *average score*. To determine your class refer to table "A" for your average score handicap. For example if your average is 200, this figure lies between 194-205 and the handicap is 170. Now refer to Table B and for men 170 handicap places you in the Bowmen class and for women a handicap of 170 places a woman in the Open class.

Suppose your club holds a handicap tournament and you have a 170 handicap. If you shoot your average score of 200 in the tournament your total score will be 200 plus 170 or 370. In the bowman class the average score cannot exceed 228 for men. The corresponding handicap is 150, and the gross score is therefore 228 plus 150 or 378. In this example only 8 points separates you from the top of the bowman class. If you are competing strictly on a class basis there would be 28 points difference between your average score of 200 and the top of the Bowman class which is 228. It should be evident that competition is placed on a more equitable basis when the club holds handicap tournaments. Every archer stands a chance of winning in his class if he can better his average score by a few points.

If you are pointing toward your first handicap and your most recent

TABLE A

Average 28-Target Score	Handicap
394 up	0
282 - 393	10
370 - 381	20
358 - 369	30
346 - 357	40
334 - 345	50
322 - 333	60
311 - 321	70
299 - 310	80
287 - 298	90
276 - 286	100
264 - 275	110
252 - 263	120
241 - 251	130
229 - 240	140
217 - 228	150
206 - 216	160
194 - 205	170
182 - 193	180
171 - 181	190
159 - 170	200
147 - 158	210
136 - 146	220
124 - 135	230
112 - 123	240
100 - 111	250
88 - 99	260
76 - 87	270
65 - 75	280
53 - 64	290
41 - 52	300
30 - 40	310
10 - 29	320

score is 40 or more points higher than the "average score", your scores do not represent your ability and you should not be handicapped until you have turned in at least two additional 28-target scores.

Handicaps are revised monthly and the revision is based on all 28-target field scores shot since the date of the last handicap. These scores may be shot in tournament competition or before witnesses as described for the first handicap. To obtain the revised handicap, total all 28-target scores shot in competition during the

TABLE B

Class	Handicap	Class
Men		Women
OPEN	0	OPEN
	10	
	20	
	30	
	40	
	50	
	60	
	70	
	80	
EXPERT BOWMAN	90	
	100	
	110	
	120	
	130	
	140	
BOWMAN	150	BOWMAN
	160	
	170	
	180	
	190	
ARCHER	200	
	210	
	220	
	230	
	240	ARCHER
NOVICE	250	
	260	
	270	
	280	
	290	
	300	NOVICE
	310	
	320	

month and divide by the number of scores to obtain the "average score" for the month. Locate this new "average score" in Table A and the corresponding handicap for this new score. **THIS IS NOT YOUR NEW HANDICAP.** To obtain the new handicap add the handicap figure you have just computed to twice the former handicap and divide the re-

sult by three. This final figure is your *new handicap*.

Most clubs furnish a handicap card on which your handicap is recorded. Scores shot on foreign courses are recorded on this handicap card for the use of your club handicapper. If your handicap card is not presented for revision within 60 days during the outdoor season it becomes void and a new handicap must be computed from recent scores. This new handicap may be reduced any amount that the scores warrant but it may not be raised more than ten points higher than the last handicap.

An archer is advanced in class when his handicap falls within the next higher class or when an archer shoots three successive scores of 28-targets above his class. In the later instance these scores may be so slightly above his class limit as not to effect his handicap; nevertheless he is given the highest handicap in the next higher class.

No archer shall be placed in a lower class during the 28 target field course shooting season, except by personal application to the committee in charge of handicaps. A review of all handicaps is made the first of the year, and all archers are re-classified according to their final handicap at the close of the outdoor season. This permits proper classification downward for those who are in a slump and does not affect those who have improved during the year.

The success of any classification system depends on the integrity of the individual archers. Any system can be beaten and an occasional individual has caused serious trouble in not a few instances. The remedy lies in disciplining the offender and not in scrapping the system. A properly made out and up-to-date handicap card is primarily the responsibility of each individual archer. If you are sufficiently interested you will see that your scores are properly made



ARCHERY COMPETITION is at its best when each competitor stands an equal chance of winning some recognition on the field archery course. A handicap system under which each archer must shoot his best gives each contestant a fair opportunity.

out and handed to the proper officials.

In an evergrowing number of clubs handicaps are used in competition. Class emblems or pins are awarded to members when they progress from one class to a higher class. In this method an archer can win only one class award in each class. An additional incentive is an annual trophy which is awarded to the archer who makes the most progress during the year. A beginner may well earn this award in his first season of competition. Sooner or later each club finds a number of repeaters among its club members. They are those archers who are careful to shoot at the top of their class, but not over the class average score. They win one class award after another. In the system

wherein the class award is made only for progress from one class to a higher class the hardware collector is out of luck unless he shoots each tournament to the best of his ability. The cost of medals and trophies can be a financial burden to a club. You can keep this cost within reason at your club and provide plenty of competitive shooting in which no archer can afford to coast along and every archer has an equal chance to win, by using handicaps, and merit awards for progress from class to class. Try it. You can increase the member's interest and participation in your club tournaments and everyone will know when you are presented with an award that you earned it by your best effort.

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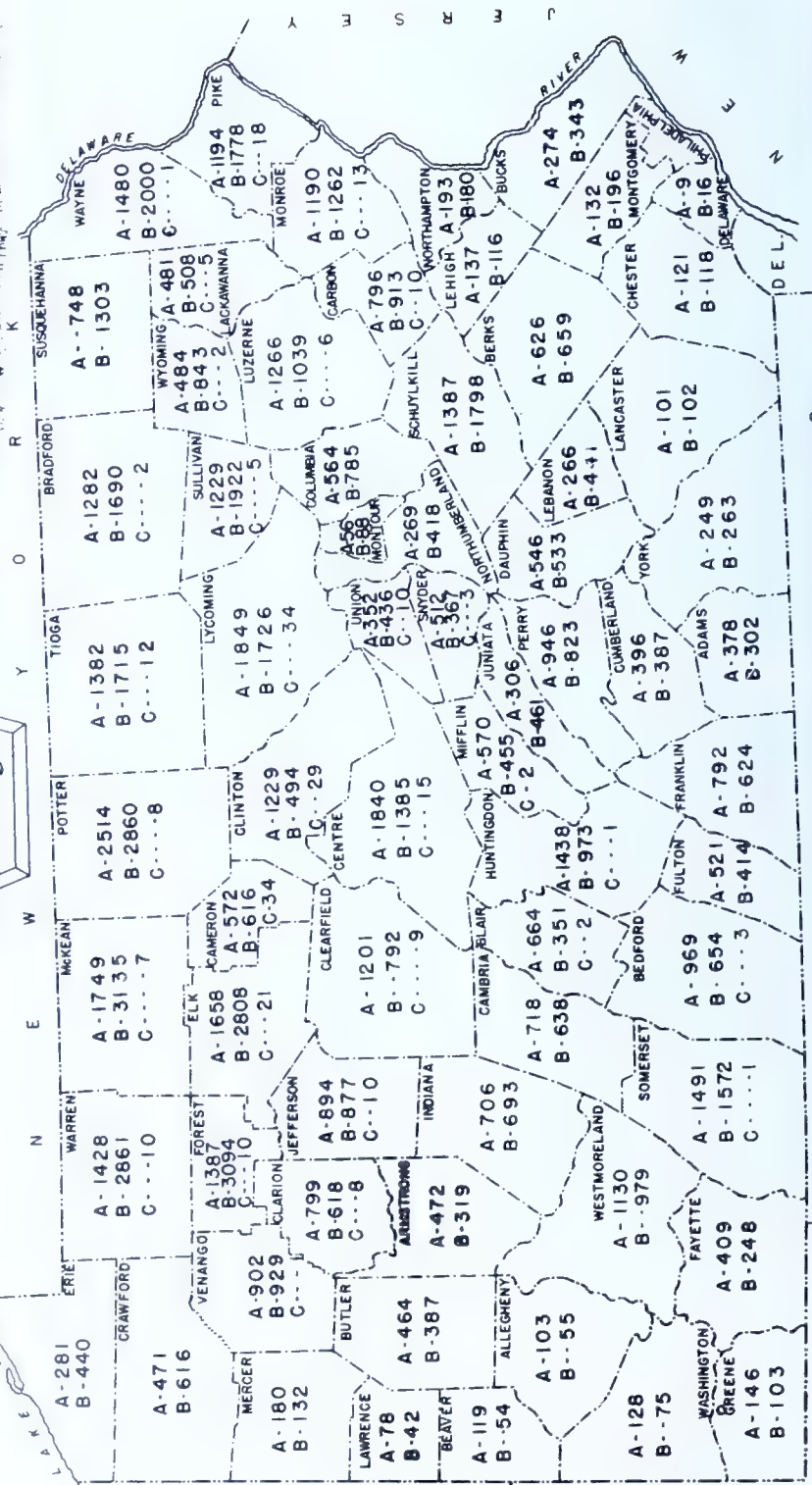
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1957 DEER & BEAR KILL

Pennsylvania Game Commission
Harrisburg, Pa.



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B - 1 ANTILERLESS DEER KILL
C - 1 BEAR KILL

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PENNSYLVANIA GAME NEWS

JUNE, 1958

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TEN CENTS





THE STORY BEHIND THE COVER

BIOLOGICALLY it would be most unlikely that the newlyweds portrayed on this month's cover would be found so close together in June. During these bright

and sunny summer days life for father is one thing, life with mother another.

For farther pheasant, this is a time of watchful waiting. The period of courtship which started last February and reached a peak in March is now ended. He still occupies about the same territory that he established then with much crowing and fighting, but his job now is to stand guard over his harem and many offspring. A note of alarm from any of his two or more wives will bring him at top speed to defend them with bill, wings or spurs.

Hens, however, are having other troubles. They started laying eggs in late April, usually selecting a nesting site in grassy cover. Here they lay as few as five or six eggs or as many as 23, with the average clutch size of 11 eggs. It takes about two weeks to complete their clutch before actual incubation starts. Broods begin hatching in mid-May for those birds fortunate enough to not have their first nests destroyed. Most pheasant hens, however, are not that lucky. Usually at least six of 10 nests are lost, mostly due to farm machinery with the hay mower being the most common type of "grim reaper." But unlike some other game birds, especially the ruffed grouse, hen pheasants are both willing and able to try again. They will renest a second or third time, if necessary, laying more eggs well into summer.

Thus in June most hen pheasants are either incubating or brooding their young. Pheasant chicks hatch fully developed and are able to walk almost at once. They leave the nest just as soon as they are dry. Their mother leads them around, brooding them like a domestic chicken and keeping them dry during summer showers. For the first week they feed almost entirely on insects but by the second week they are taking vegetable food. Soon thereafter the chicks are able to make short flights and at about six weeks of age the young pheasants are fully feathered. By the end of the second month they begin to take on adult coloration. By late August this year's crop of pheasants will be pretty much on their own, ready to face the rigors of the hunting season and winter ahead.

And so mother's day and father's day are left behind in the world of pheasants. America's most popular gamebird import, despite nesting troubles and the fact that only about seven of every ten chicks hatched are still alive come autumn, makes a most valuable contribution to the hunting scene. The spring and early summer portrait of bright color and cautious living is destined to spring sportingly and with considerable confusion before man, dog and gun.

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by the

JUNE, 1958

Pennsylvania Game Commission
Commonwealth of Pennsylvania
GEORGE M. LEADER, *Governor*

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Editorial . . .

The Land and Wildlife

GAME MANAGEMENT, by definition, is simply "the art of making land produce sustained annual crops of wildlife for recreational purposes." But in the hard, cold realities of this roll and rocket age, something has to be added to this definition—*less* land must produce *more* wildlife.

Day by day, year after year the amount of land available for game management is shrinking. It takes land to build highways and houses, to fill all the other needs of an expanding, modern civilization. But at the same time, more and more people are demanding that the land be made to produce more and more wildlife—for the gun or trap, the camera, or just for watching.

This month the Game Commission starts a new method of "making land produce wildlife." Recognizing fully the implications of an increasing human population, with all its accompanying industry, housing, transportation and agriculture, duties of a selected group of field officers are being changed to meet rapidly changing conditions. These men are to become Land Management Officers. They will spend most of their time in developing better food and cover conditions for wildlife on State Game Lands and other leased areas.

It marks a dramatic but essential change. For the past fifteen years or more, Pennsylvania Game Protectors have been charged with full responsibility for every Commission program in their respective districts. Each officer was responsible for land management, game propagation, law enforcement, public relations, conservation education and every other phase of the Commission's work. They were "jacks of all trades" and masters of most. But in an age when specialists have become characteristic of every other profession, it is necessary that game management techniques be specialized as well. The new kind of field officer will devote his full attention and skill to such things as timber cruising, contour farming, reforestation, and erosion control. He will direct the work of the Food and Cover Corps, a group of per diem employees who do the actual cutting, sawing, planting, bulldozing and digging.

Today the Game Commission is spending almost thirty-eight percent of its total budget on land acquisition and land development for wildlife. The Game Laws requires that at least \$1.25 from each resident hunting license fee be spent for land management on areas owned by or under the control of the Commission. In addition \$1.00 of the \$1.15 fee collected for each antlerless deer hunting license must be used entirely for improvement of deer food and cover conditions on State Game Lands.

Game populations of wild birds and animals result from two things—the ability of each species to reproduce and the capability of the land to support them. Mankind cannot change the natural reproduction rate of any bird or animal. We can and must strive to build a better environment for wildlife on every available acre. Land Management Officers will be taking long strides forward to maintain and improve Pennsylvania's reputation as a great game state.



How Much Do You Know About Pheasants?

By Steve Szalewicz

WHEN the ringneck cackles in its cover, or when it is found and pointed by a bird dog, the hunter makes a few quick calculations. Most of them are concerned with the front of the bird. Where will the bird fly once it is flushed? How much should the "rooster" be led to catch the heaviest pattern and fall as a clean, quick kill? The average hunter plans, looks and thinks ahead of the bird. Maybe it's time for a look at what's behind the ringneck.

Did you know, for instance, that in Pennsylvania more ringnecks are stocked than any other species of wildlife? The Game Commission alone releases about one-quarter million pheasants each year.

Did you also know that the pheasant is a native of Asia . . . that our first president, George Washington, introduced the pheasant on his Mount Vernon Estate but that the first successful introduction of the

pheasant in America did not take place until the late 1800's. In 1882 Judge Owen Denny of Oregon, then Counsel-General at Shanghai, China shipped live Chinese pheasants to America but the birds all died in Seattle following a rough voyage. The next shipment of about 50 birds arrived safely in Portland and were liberated on the old Denny homestead in the Willamette Valley, near Peterson's Butte, Lynn County, Oregon. The liberation was the occasion for a big celebration. By 1892 "Denny Pheasants" as they were then called, had become so abundant in that part of Oregon that an open season of 75 days was declared and 50,000 birds were said to have been killed on the opening day.

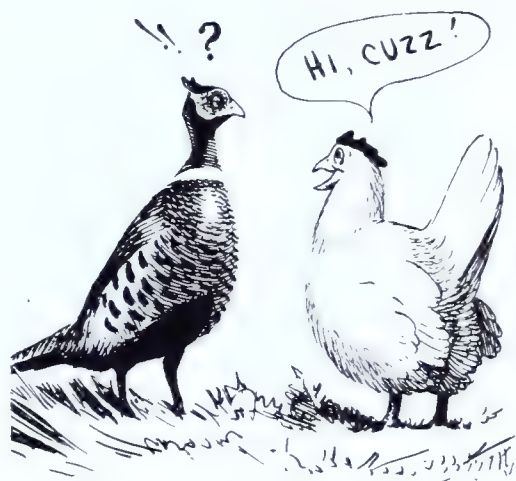
Probably the first importation of ringneck pheasants into the United States, however, was made by Richard Bache, son-in-law of Benjamin Franklin, in 1790. These birds were

brought from England and were released near Beverly, New Jersey. The stocking did not "take," however, in that there was no reproduction in the wild. During the early 1890's private individuals imported more pheasants from England and released them in Lehigh and Northampton Counties. These plantings were at least partially successful and formed the original "fore-pheasants" of our present ringneck population. From the late 1890's until 1915 other private releases were made in Pennsylvania and the Game Commission started their stocking program that year.

Did you also know that . . .

. . . while the word "pheasant" may symbolize only one bird (the shooting variety), there are 16 other recognized genera of pheasants including 171 species and subspecies . . . that scientifically speaking, even the peafowl is a genus of pheasant . . . that chickens and their ancestors are another . . .

. . . that chickens and pheasants can be crossed just as the guinea hen and the peafowl but their offspring cannot reproduce . . . that the ancestor of the common chicken is one



of the pheasant family, the red jungle fowl . . . that the ancestors of the common ringneck now found in the wilds of Pennsylvania are: Black-necked pheasant, Mongolian pheasant, the Chinese Ringneck, the Formosan Ringneck, plus numerous subspecies and varieties of all of these . . . that most white pheasants are not true albinos. Albinism appears in varying degrees. By selection, tendencies toward white are usually eliminated in the wild but in captivity white pheasants can be selectively bred to produce true white birds.

. . . that while many persons are familiar with the courtship ceremony of the turkey and the peafowl, only a few hunters may have seen the pheasant "court" his mate. He is able to swell the red patch on his face, fan his tail, ruffle his feathers until he looks twice his real size. Then he lowers his wing on the side toward the female, shifts his back. The female has a very good view of all his brilliance but she at first appears to have no interest in it or his other virtues.

. . . that the cock pheasant becomes highly territorial in the spring of the year. He establishes an area of his crowing represents a warning to all other male pheasants to keep out. He will even defend his territory



until death (although this is seldom, if ever, necessary).

. . . that pheasant hens usually lay only an occasional egg in most of Pennsylvania in April and seldom begin "serious setting" until May. In the wild a pheasant's nest will usually contain from 9 to 12 eggs but sometimes two or more hens will lay eggs in the same nest, thus accounting for clutches of up to several dozen eggs. If the nest is broken up, the pheasant hen will lay another clutch and even a third, if necessary. In captivity hens appear to lay eggs all over and are able to produce up to 40 eggs per bird in a laying season.

. . . that pheasants eggs range from blue to green to brown in color with some a combination of the various shades of colors. The eggs are edible but have a much tougher membrane than the domestic chicken egg. The average pheasant egg weighs 36 grams or 1½ ounces. A dozen eggs will average 18 ounces as compared to the minimum large chicken egg weighing 24 ounces per dozen.

. . . that a pheasant chick is hatched with a coat of down which is yellow and contains brown "streaks." These streaks are to be his individual feather tracts. His first

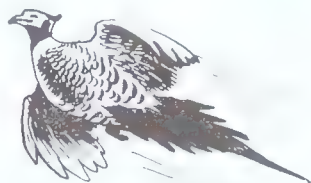
feathers appear on the wing. Later he will develop breast feathers followed by feathers in the brown streak along his back. By the time his tail is quite apparent, he begins to develop feathers on his head and legs. His head or face feathers are the last to develop.

. . . that a week after hatching, the pheasant chick can fly about one foot and at three weeks of age he can lift his body about 10 feet off the ground. That both male and female chicks have the protective coloration of the female and the different colored plumage does not appear on the male until he is about 7 weeks old. It is not until the male is 18 weeks old that he assumes full plumage, with the white ring around his neck usually appearing last.

. . . that there are many predators which consider pheasant chicks a delicacy. Crows find them a treat; so do snakes and skunks, rats and weasels. Even the Sparrow hawk, which normally feeds on insects and rodents, has been known to dart in and take a chick when the mother is not looking. As the chicks get larger, stray cats may have a feast. But when the pheasant becomes large enough so that rats and weasels no longer bother them, the fox, mink, raccoon and man enter the picture on the ground while owls and hawks swoop down from the air. Usually skunks and opossums are too slow to catch an adult ringneck unless it has been wounded.

. . . that there is a "peck order" in birds. It exists in pheasants to such an extent that in the tension of being caged, the bird that becomes injured or is weak falls to the bottom of the "peck order." Not only is this bird prevented from eating until last, but its fellow pheasants pick at him continuously. Should blood be drawn on one little bird, all the others are attracted to it and cannibalism develops.

. . . that a pheasant reared indoors



OLD AGE HASN'T SLOWED HIM
DOWN A BIT - AND I'LL BET
HE'S ALL OF FOUR YEARS OLD!



has light colored legs; one reared outside has very dark gray legs. The legs of the pen reared bird darken as soon as it is placed on the ground. Authorities claim they can tell the difference between the two by this feature. While inside a building a pheasant does not oil its feathers. It appears very ruffled and frizzled. Birds reared outdoors appear sleek and well-groomed. When pen-reared pheasants are moved from indoors to hardening pens outside, they are not prepared for any moisture in the form of rain and are apt to die from exposure.

... that since the ringneck seldom travels more than 10 miles from "home," many persons think the pheasant would deteriorate by inbreeding. But nature provides a rather unusual phenomenon which helps to counteract this problem. In the fall of the year something seems to explode within each young bird. It gets an adventuring spirit and, like the grouse, seems to go "crazy." This is the time when pheasants fly into car windows, school rooms, etc. All pheasants get restless and tend to make short migrations. Instead, this is a great dispersal of the pheasant population and it is nature's way to prevent inbreeding. Family groups are broken up and become mixed with other pheasants.

... that while a pheasant may live to be 14 years old in captivity, the same bird would not be expected to survive more than four years in the wild.

... that survival of the fittest has endowed the pheasant with a strong instinct of fear. Instinctively a pheasant will use spurs and feet to defend himself. Many propagators have had to drop a bird suddenly when they got raked with the male pheasant's sharp spurs.

... that when a man breaks a leg, he cannot walk. But when a pheasant breaks a leg, it will run as fast as ever on the stub, dragging the rest.



A pheasant utters no noise when it gets hurt. But when frightened, the pheasant will call out a warning to all other pheasants within hearing range.

... that the "ears" on a pheasant are not used for hearing at all but are simply a decoration to assist him in attracting his mate.

... that the fastest flying bird in the world is the hummingbird which can travel between 80 and 90 miles per hour. Ringneck pheasants travel between 40 and 50 miles per hour while ducks travel between 50 and 60 miles per hour. Pheasants are incapable of long, sustained flights but they have been known to fly over water to an island a mile away. Banded birds have been found to move 10 or more miles from point of release.

The writer is indebted to Edward N. Lawson for most of the above information. Mr. Lawson is manager of the Seeley Farms Regulated Shooting Grounds in Crawford County. He holds a Bachelor of Science Degree in Poultry Husbandry from Cornell University. For many years he accumulated first hand information about pheasants by helping raise 24,000 ringnecks annually at the State Game Farm, Ithaca, New York. He has authored many articles for professional and popular journals and is a member of the American Pheasant Society.



STATE FLOWER, the mountain laurel, is relatively abundant in Pennsylvania but it is nevertheless one of the wildflowers that should not be picked. Mountain laurel blooms during June and is one of many wildflowers which, in spite of its beauty and nectar, does not attract either butterflies or moths.

Check Before You Pick Those Flowers

By Larry J. Kopp

(Photos by the Author)

WHETHER you're a Girl Scout, Camp Fire Girl, Brownie, Future Homemaker, or just a housewife who loves wild flowers—check before you pick them!

Pennsylvania is blessed with at least two-thousand species of wild flowers, most of which are natives. Hundreds of the most beautiful and fragrant wild flowers found in our Commonwealth may be picked with-

out a second thought. Black eyed susan, oxeye daisies, daffodils, wild pinks, and rockbells are among them.

However, our woodland trails, country roadsides, and winding streams are also beautified by the appearance of numerous wild flowers which can be classified as not only extremely rare, but world-famous as well.

It may seem ironic, but the vast majority of famous, rare flowers are quite easily destroyed by the simple act of picking them.

This is really a roundabout way of saying: Don't be content with merely admiring a picked flower for a few days on your living room table—let them grow and enjoy the experience of seeing flowers in full glory for many days, weeks, or even months, then do it all over again next year, and the year after!

A few of Pennsylvania's rarest wild flowers which should not be picked or disturbed under any circumstances, are illustrated on these pages.

Obviously there are a great many more, but since it is impossible to illustrate them here, I hasten to call your attention to: *Beginners Guide To Wild Flowers* (Putnam—\$3.50) by Ethel Hinckley Hausman.

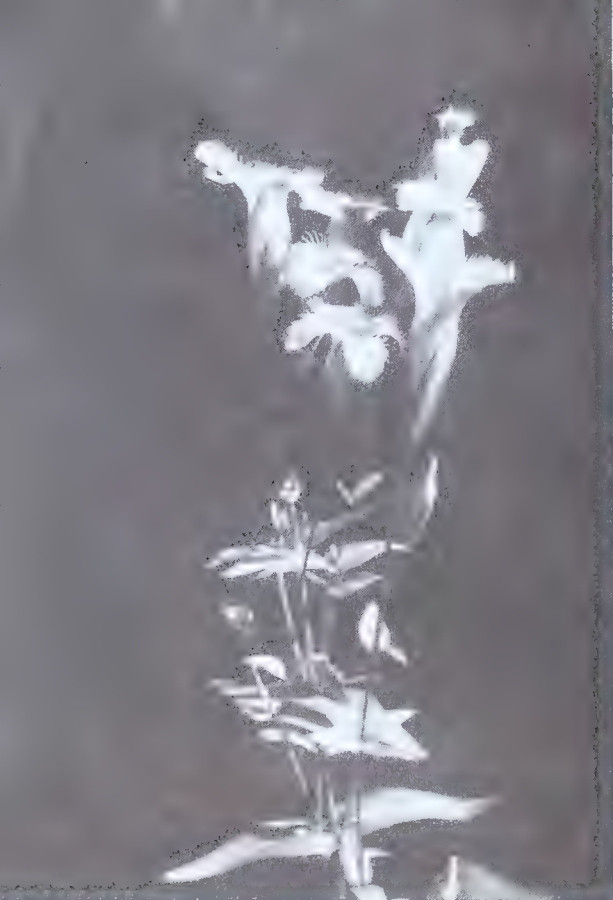
To my knowledge, this is one of the most outstanding and convenient guides to wild flower identification, available. The author has carefully described each flower, but the important part is that she has taken great

TURTLEHEAD is one of Pennsylvania's most interesting wildflowers and gets its name because the flower resembles the head of a turtle. It grows along streams and in wet meadows, normally blooming during August and September. It is the only wild plant upon which the caterpillar of the Baltimore butterfly feeds.



MOCCASIN ORCHID blooms during late May and early June and is often a familiar sight along woodland roads and trails. At one time this plant was harvested extensively for its roots which were thought to be of medicinal value.





FRINGED GENTIAN is one of the world's most famous wildflowers. Not only is it the very last wildflower to bloom in Pennsylvania, sometimes not reaching full-bloom until late November, but it blooms only once every two years. It never blooms twice at the same place. It is found in open wooded areas, often in moist hollows.

GRAPE HYACINTH is one of the most elusive wildflowers. The leaves look almost exactly like ordinary grass and the purplish flowers tend to blend with an early spring background. It is one of the very first flowers to bloom in the spring. The plant belongs to the lily family and is found in moist areas.



pains to indicate exactly which species should not be picked at all; and which species may be picked when the flowers are abundant.

In the event that you may be inspired to transplant various wild flowers which, for some reason or other, are in danger of being destroyed, I would recommend: *Wild Flower Guide*, by Dr. Edgar T. Wherry (Doubleday—\$3.50). In this book, Dr. Wherry goes into detail on how to transplant and propagate even the most difficult species.

However, unless flowers are actually in danger, or you desire to make a wild flower garden, the best policy is to leave all rare flowers where they are. In other words, have your cake and eat it too!

Editor's Note: All plants, wild or cultivated, are given indirect protection through property ownership. It is illegal to pick wildflowers or to remove any plant, shrub or tree from privately owned land without prior consent of the landowner. On certain types of publicly-owned land, such as State Game Lands and State Forests, it is likewise illegal to remove trees, shrubs or other plants without prior approval of the Game Commission or Department of Forests & Waters. Persons cutting, picking or removing plants from these lands are subject to a sizeable fine.

Although there are no specific laws concerning the use and protection of wildflowers, the Pennsylvania Department of Agriculture, Bureau of Plant Industry, strongly urges people not to pick certain species due to their scarcity or because they are rare. The following list is given as a guide:

- Azalea, Pink
- Arbutus
- American holly
- Bloodroot
- Blue-eyed Mary
- Bluebells

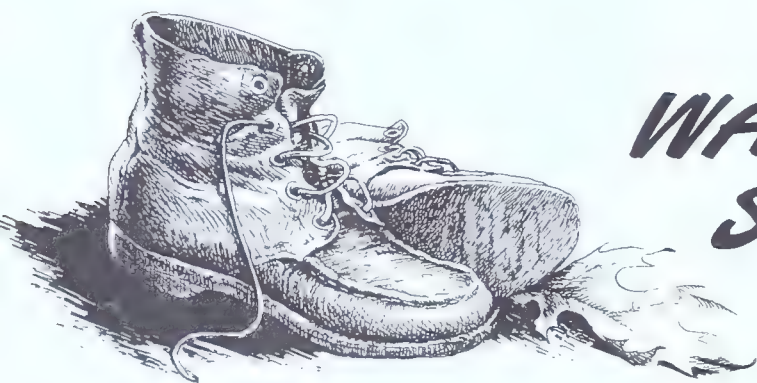
Box Huckleberry
 Columbine
 Clintonia—White and Yellow
 Cardinal Flower
 Club Moss
 Dutchman's Breeches
 Dog's Tooth Violet, Yellow & White
 Dwarf Cornel
 Ferns—Royal, Walking, Cliff Brake,
 Chain, Climbing, Maidenhair
 Fringed Polygala
 Flowering Dogwood
 Gentian, Fringed
 Golden Club
 Golden Seal
 Ginseng
 Greek Valerian
 Hepatica
 Iris, Dwarf
 Lady Slipper—Yellow, Pink, Showy
 Lupine, Wild
 Lily, Day
 Laurel
 Marsh Marigold
 Pitcher Plant
 Orchis, Yellow Fringed, Large Purple
 Fringed, Small Purple-fringed,
 Showy
 Pink—Grass, Indian, Fire
 Plantain, Rattlesnake
 Passion Flower
 Pogonia, Whorled
 Redbud
 Snake-mouth
 Shooting Star
 Slender Blue Flag
 Sweet Bay
 Tway Blade
 Twinleaf
 Trillium — Sessile-flowered, Snow,
 Large-flowered, Painted
 Tresses—Ladies, Slender Ladies
 Wood Anemone

FAIRY-WAND is a rare wildflower, usually found as one or two individual plants in damp, open woodlands. It blooms during late June and July and is sometimes erroneously identified as blazing star or devil's bit. Depending on weather conditions, it may not bloom every year.



DAY LILY should not be picked unless they are very abundant. The plant propagates itself rapidly, sometimes taking over an entire meadow within a few years. The flower closes at dusk and does not reopen until late the following forenoon, thereby getting its name.





WALKIN' SHOES

By NED SMITH

Poisonous Snakes of Pennsylvania

THE woman shifted her heavy bucket to the other hand and stepped off the path toward a berry-laden huckleberry bush. As she pushed through the brush a sinuous form lashed out from beneath the low-growing foliage, striking her ankle. She jumped back, a startled

cry breaking from her lips! The whining buzz of a rattlesnake complained angrily from the shadows as she fled screaming down the path.

In a public park in another county a picnicker closed the door of an outdoor fireplace—closed it, quite unintentionally, on a large snake that had taken refuge there. The snake promptly bit him on the thumb. In a frantic effort to “save his life” the man slashed his thumb to the bone with his pocket knife. Ironically, the snake was a harmless milk snake which he mistakenly identified as a copperhead, but the knife wound was severe enough to permanently impair the use of his thumb.

These two incidents exemplify the extremes we should avoid in our contacts with snakes. In the first case the woman failed to take the snake menace seriously until she was bitten; in the other, the picnicker's unreasoning fear of snakebite and his inability to identify the one that bit him subjected him to unnecessarily severe treatment. A little knowledge of our reptilian neighbors would have saved both of them a lot of grief.

1. Why are pit vipers so named?
2. Water moccasins are found in the southern part of the state? True or False?
3. Poisonous snakes cannot strike unless they are coiled. True or False?
4. What is a black snapper?
5. Which is more poisonous, the copperhead or the timber rattler?
6. The segments of a rattlesnake's rattle correspond to his age. True or False?
7. What happens to a snake's long fangs when it closes its mouth?
8. Rattlesnakes always rattle before striking. True or False?
9. In what part of the state is the massasauga found?
10. The first thing to do when bitten by a poisonous snake is to run for help. True or False?

(Answers to these questions will be found at the end of this article)

Pennsylvania is home to three different poisonous snakes—the copperhead, the timber rattlesnake, and the massasauga, a small rattlesnake of western distribution. The poisonous water moccasin does not occur north of the Dismal Swamp of Virginia, although the harmless water snake is often incorrectly called by that name.

All venomous snakes found in this state are classed as pit vipers, so named for the conspicuous hole in the side of the face between the eye and the nostril. All snakes with this feature are poisonous. The function of this depression is to detect temperature changes. Just prior to shedding their skins snakes are rendered temporarily blind by the loosening of the epidermis that covers the eyes. Even at that time pit vipers can locate and strike warm-blooded prey, guided by this sensitive organ. In experiments, the pit was found capable of detecting changes of as little as one degree fahrenheit.

Another characteristic of the pit vipers is the elliptical eye pupil, which in strong light is reduced to a mere slit. Non-poisonous snakes have round pupils. Furthermore, the plates on the underside of the tail behind the vent are arranged in a single row on our poisonous snakes, in a double row on the non-poisonous ones.

The venom inflicting apparatus in pit vipers is an amazingly effective specialization. Two glands, one behind each eye, secrete the venom. These are connected by ducts to their respective fangs—sharp, elongated, hollow teeth.

Because of their extreme length, the fangs are mounted on movable bone bases, permitting them to fold up against the roof of the mouth when the jaws are closed. A fleshy sheath encases each fang when it is not in use. To be certain the reptile always possesses a set of first-rate weapons Nature has fitted him with several reserve fangs in different



YELLOW PHASE

BLACK PHASE

TIMBER RATTLESNAKE

stages of development that lie tucked away in the gums next to the functional fangs. They replace the latter, which are shed at frequent intervals.

Contrary to popular belief a snake must not be coiled in order to strike—in fact, it cannot strike with the coiled part of its body. Actually, striking is usually accomplished by suddenly straightening the laterally folded S-curves of the body. Watch an annoyed copperhead or rattler. His first motion will be to place his head in a position for striking. If really angry he will gather as much of his body into S-curves as possible, for he knows that the distance of his strike is limited by the length of those loops when straightened out. The actual strike is too quick for the eye to follow. The fangs stab deep into the flesh of the victim, clamp down for an instant while muscles over the poison glands contract to force venom into the wound, then withdraw instantly.

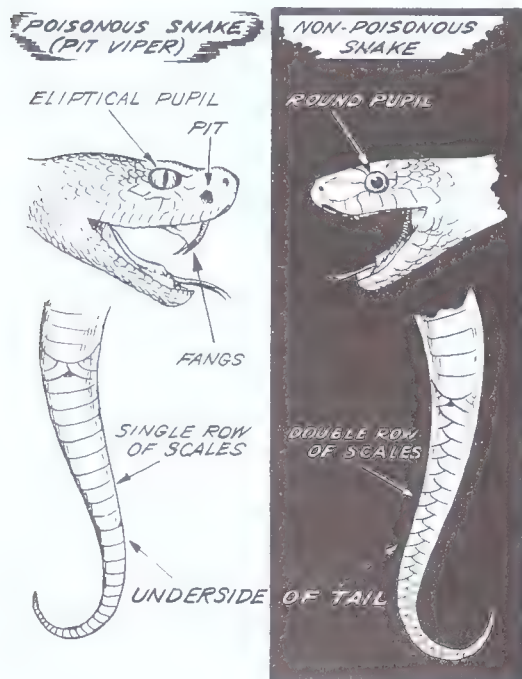
The venom itself is a liquid, clear to amber in color. Two types are known, hemotoxic and neurotoxic. The former affects the blood and body tissues, the latter damages the

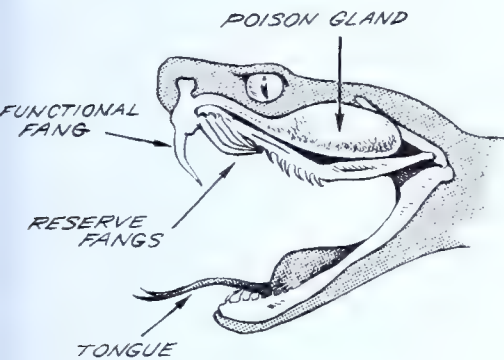
nervous system. The venom of pit vipers, although containing a small amount of neurotoxin, is primarily hemotoxic in action. It destroys considerable tissue in the vicinity of the bite, affects the blood's coagulation, destroys the red blood cells, and lowers the body's resistance to infection. The blood vessels themselves, as well as the kidneys and other internal organs are frequently damaged.

Snakebite is a serious matter, to be sure, but your chances of being bitten can be practically nullified by the application of a little common sense. When in snake country wear high topped shoes or boots. It is rare for a Pennsylvania snake to strike more than six or eight inches above its own level, so on flat ground such footgear will provide reasonable protection. On sloping or rocky ground be careful not to step into places where a concealed snake might be lying some distance above the ground. Watch where you put your hands when climbing or when picking things off the ground. Look around closely before sitting down.

Always carry a snake bite kit when in snake country. Suction kits are best for the average person, as anti-venin can be quite dangerous in inexperienced hands. For one thing, injections of antivenin can cause the immediate death of persons sensitive to horse serum. Furthermore, it is more effective in combatting the neurotoxic agencies of the venom than of the hemotoxic, hence should be considered merely a supplementary measure.

The main object in snake bite treatment is to remove as much of the venom as possible before it can be assimilated by the body. The first step, therefore, is to apply a tourniquet several inches above the bite to retard the spread of the poison. *This should be done immediately.* Use a wide tourniquet rather than a narrow





**BITING APPARATUS OF
A PIT VIPER**

one, and adjust it so that a finger can be forced beneath it.

If possible, sterilize the area around the bite as well as the cutting instrument, which can be a knife, razor blade, or a conventional lancet from a kit. Make an X-shaped cut at each fang mark, *keeping it small enough to be covered by the suction cup*. In the past many victims have been unnecessarily and permanently injured by too drastic cutting. It has been found that except in the most severe cases deep cutting is not necessary— $\frac{1}{8}$ inch deep generally sufficing. Particular care should be taken not to cut into the bone, tendons, or nerves—in fact, on the bony parts of the hands and feet it has been suggested that cutting be delayed until the swelling has made it safer. But get that tourniquet applied at once!

Moisten the rim of the suction cup before applying it. If you are without a suction kit, the venom can be sucked out with the mouth. As the swelling progresses move the tourniquet ahead of it and make additional incisions at the edge of the swelling. At no time should the tourniquet be so tight that the part below it turns blue or becomes cold. Get to a doctor as soon as you can, but keep exercise and excitement to a minimum.

The Copperhead

In spite of the fact that the copper-

head is our most abundant and widely distributed venomous snake, a surprisingly large number of people who should know better still can't distinguish it from such harmless species as the milk snake or the water snake.

Actually, the copperhead is one of our most easily identified serpents. The ground color of its body is generally pale grayish brown to pinkish. The darker chestnut brown markings are shaped like hourglasses, wide at the ends and narrow in the middle, and span the back like saddlebags. It is the only Pennsylvania snake with such markings. The head is generally the color of old copper, and, as in all pit vipers, is noticeably larger than the neck.

Despite its sinister appearance the copperhead is not an aggressive snake. It seems to know its "dead leaf" coloration renders it nearly invisible, for when approached it usually lies perfectly still. Many a person has passed within inches of its venomous head and never known it.

The copperhead is not a large snake. Most specimens run about two



WATER SNAKE



**MILK SNAKE
(HOUSE SNAKE)**

**THESE HARMLESS SNAKES ARE OFTEN
MISTAKEN FOR THE POISONOUS COPPERHEAD**



MASSASAUGA



or $2\frac{1}{2}$ feet long. A three footer is a big one. Their fangs are proportionately shorter than a rattler's, their venom is less in both volume and in potency, and the bite is seldom fatal if properly treated. Nevertheless it is a violently painful experience.

A large part of the copperhead's diet consists of insects, especially larvae. Mice are consumed in large numbers, along with lesser amounts of frogs, birds, etc.

Copperheads spend the winter months hibernating in dens, often in company with rattlesnakes and pilot blacksnakes. As the spring days grow longer and warmer they venture farther from the denning area, spreading throughout the surrounding territory for the summer. In the fall they once again return to the den to spend the winter.

The young are born in early autumn. They average six to eight in number and are born alive, but encased in a membranous sac. Far from helpless, they arrive in the world fully equipped with fangs and venom.

The Timber Rattlesnake

This is the largest and most dangerous of Pennsylvania's three poisonous snakes. It attains a maximum length of more than five feet, and the average is probably about 42 inches.

The timber rattler varies greatly in color. In the so-called yellow phase the ground color is lemon yellow washed or stippled with pale olive. The cross-bands and blotches are olive brown to black and the head is olive in color. At the other extreme is the black phase, in which the color is nearly solid black. Between the two every conceivable gradation occurs. Regardless of the color phase the tail is always black, and there is apparently no relation between color and sex.

Rattlesnakes are unique in that they have the jointed appendage on their tails that gives them their name. When born, a rattlesnake's tail terminates in a horny cap called a button.

COPPERHEAD

Each time it sheds its skin—generally several times a year—an additional segment is added to the base of this appendage. Thus, in a few years a full sized rattle is formed. As they are fragile things, they are soon worn thin and broken, with the result that few complete rattles are found. There's nothing inside the rattle. The buzzing sound is produced by the rapid vibration of the loosely-fitting segments. Many other snakes vibrate their tails when disturbed, but only the rattler does so with such startling effect.

Incidentally, a rattlesnake will *not* always warn you by rattling before he strikes. He usually does, but don't count on it. When surprised suddenly he is likely to shoot first and ask questions later.

The timber rattler generally disdains cold-blooded prey and feeds chiefly on mice, rats, birds, rabbits, chipmunks, and squirrels. The smaller prey species are merely grasped and swallowed. The larger animals are struck and released. The rattler knows they won't go far and he later follows their scent trail and swallows them.

In some places rattlesnakes gather in unbelievable numbers to hibernate for the winter. Denning areas in Pennsylvania producing more than one hundred snakes are not unknown, although most are less populous. Like the copperheads, the rattlers scatter into the surrounding countryside with the advent of warm weather, but a number of snakes usually remain at the den throughout the summer.

The Massasauga

Few Pennsylvanian's have ever seen the little Massasauga, or black snapper, for it is found in only five or six of the western counties. It is fond of marshy or grassy country, in contrast to the rocky highlands favored by the timber rattler.

The massasauga seldom exceed $3\frac{1}{2}$

feet in length, and the average is little more than two feet. The amount of venom secreted is small, but this snake is quite poisonous just the same, and should be respected accordingly.

The color of the massasauga is gray or brown, with a row of squarish black or dark brown blotches down the middle of its back and rows of smaller ones along each side. The top and sides of the head behind the eyes are usually marked with dark longitudinal blotches. The rattle is proportionately smaller than that of the timber rattler, and the top of its head is covered to a point well behind the eyes with plates instead of the small scales of the timber rattler.

Food of the massasauga consists chiefly of insects, mice, and frogs.

Authorities agree that the massasauga is not easily induced to bite, but when he starts he doesn't know when to quit. No other venomous snake in Pennsylvania gets in more strikes per minute than a thoroughly aroused black snapper.

ANSWERS TO THE QUESTIONS

1. Because of the facial pit located between the nostril and the eye.
2. False. They are not found in Pennsylvania.
3. False.
4. A small rattlesnake whose other name is the massasauga.
5. The timber rattler.
6. False. They represent the number of times he has shed his skin, and then only if none have been lost.
7. They are hinged to fold up against the roof of the mouth.
8. False.
9. In the extreme western part.
10. False. Violent exercise merely steps up circulation which in turn carries the poison through the body at an accelerated rate.



"Shooting McCloskeys"-Champions

By W. Boyd Tobias

SKEET shooters and spectators who follow the tournament trails in the East usually have their attention attracted to a husky pipe-smoking chap wearing a rust-colored cap and a brassard-covered shooting jacket and an attractive, vivacious young woman who is his constant companion.

If the skeet devotees do not spot the couple on the shooting grounds before the tournament opens they are soon attracted to them after the shooting starts for few, very few, targets fall to the ground unbroken

when either the man or the woman are at shooting posts between skeet houses.

The two are the "Shootin' McCloskeys" of Lock Haven, Clinton County, Pa., and they hold the man and wife all gauge skeet-shooting championship of Pennsylvania which they earned at the annual State Skeet Association meet in Huntington in 1957.

At the same meet, Alton P. McCloskey, the male member of the straight shooting duo, won the all-gauge skeet shooting championship

of the Commonwealth in a 75-bird shoot-off with Bill Hollinger, of Harrisburg, with whom he tied in the regular competition with 98 hits out of a possible 100.

McCloskey and Hollinger each broke 24 of 25 targets in two 25-bird shoot-offs and then the calm, iron-nerved Lock Haven sportsman coolly shattered all 25 of his clay targets in the third round while Hollinger was getting 22.

One would never know upon observing him at the skeet traps that A. P. McCloskey suffered a severe heart attack in 1956 and couldn't as much as pick up his favorite shotgun for several months.

"That's probably the reason I don't have as many 1956 trophies as I might have had," he explains modestly.

An illness such as that which struck Alton McCloskey might have discouraged many sportsmen to the extent they would cease participation in a sport which is as competitive as skeet shooting. But not the cool and calm pipe-smoking marksman of Lock Haven.

With the full consent of his physician and the encouragement of his devoted wife, McCloskey returned to the skeet traps as soon as his strength returned, and within a year had won a coveted shooting title.

The "Shootin' McCloskeys," skeet enthusiasts if ever there were two, would rather break clay pigeons than eat. As proof, they drive all the way from Lock Haven to Bloomsburg every week just to keep their shooting eyes keen through practice on the Columbia County Rod and Gun Club skeet traps.

Although he has been a hunter ever since he could legally carry a gun in the woods, McCloskey did not begin serious skeet shooting until 1951, when he broke 97 targets in the state meet and, as he puts it, "didn't even place."

Ever since then he has been a

dominant competitor in state skeet shoots. In 1952, at the Blue Mountain Skeet and Trap Club grounds near Harrisburg, he took the all-bore state championship and, with O. M. Stanton, of Troy, Pa., won the two-man team championship.

In 1953, the Clinton County marksman won the .410 championship at the state shoot in Huntington, and the following year on the Blue Mountain range he won the Class AA all-gauge title.

In 1953, after meeting Ann Hutchison, daughter of Mr. and Mrs. Robert M. Hutchison, of 318 Arch Street, Montoursville, Pa., at a skeet shoot, the present state champion took her as his bride, and ever since the vivacious Ann has been his shooting companion.

Alton and Ann McCloskey were runners-up in the husband and wife team championship competition in the 1956 state shoot and he won the .410 championship despite his session with a recalcitrant heart.

At the same skeet shooting meet in which her husband won the Pennsylvania championship of 1957, Ann McCloskey was runner-up to Brenda Helmer, of Pittsburgh, for the state





all-bore women's championship, losing by only one target.

The former Lycoming County girl, interested in hunting through a sports-loving father, but not a skeet shooter until after her marriage, holds the .410 and 28-gauge women's championships of Pennsylvania and was runner-up in both the 12 and 20-gauge competition.

Skeet shooting trophies of all kinds are spilling out of a big trophy case in the McCloskey living-room even though they have given a number of their trophies as awards in county and club shoots. Altogether, the McCloskey team has won between 75 and 100 trophies ranging from large, ornamental statues to large silver dishes. In addition, they have carried off many prizes of merchandise and cash.

The couple hunt together, principally for woodcock and doves, and last Christmas each gave the other duck decoys as holiday gifts.

Mr. McCloskey, one of two Pennsylvania Skeet Shooting Association members who are directors of the National Skeet Shooting Association, with headquarters in Dallas, Texas, expects to participate in the national championships at Waterford, Mich., in the autumn of this year.

The McCloskeys, eager to make good shooters of those who are devotees of their favorite sport, have taken Robert VanKirk, a recent graduate of Lock Haven State Teachers College, under their tutelage and are making a first rate skeet shooter of him.





Only WE Can Even The Score

By Leo A. Luttringer, Jr.

THE old hen pheasant carefully placed her body over a second clutch of 12 eggs and settled comfortably for the patient job of incubating them. The nest was in an alfalfa field near a woodlot. Her first clutch of eggs was destroyed even though she selected the nesting site with wisdom and caution. It was in a fencerow well grown with briars and berries which provided good cover against winged predators. But it wasn't a winged predator which robbed her of her potential brood; it was her own landlord. Farmer Brown came along one day and decided that the cover along the fencerow was too dense and that it encroached into the cultivated field, so he set fire to it and Mrs. Pheasant barely escaped with her life.

Nature is sometimes cruel without man's interference, Mrs. Pheasant had found that out long before. She

had never raised a full brood to maturity. Perhaps the family in the making would prove an exception. Several days passed within the incubating period of 23 days and everything looked rosy; then one morning Mrs. Pheasant was aroused from a moment's lethargy by a strange rumble. The noise increased and, as it did, even the ground vibrated. She risked a look and trembled in fright as a mowing machine—juggernaut of destruction—inched its way toward the setting bird and her nest. Yards distant, just as she was about to flee, the monster stopped, a man descended from its vibrating body and walked toward her. Mrs. Pheasant crouched as low as she could, her drab coat somberly blending with the ground and alfalfa. The farmer saw her but never let on. He turned back, jumped onto the mower, and cut an island half way around the frightened bird.



On the return trip he cut another half island, leaving a circumference of refuge in which to hatch her family. Man can be as kind and generous as he can be cruel and indifferent.

But there was nothing generous in the robbery Mr. Crow committed, when Mrs. Pheasant left the nest one afternoon for a bit of food. And she was gone only such a short time. But Mr. Crow sat atop a tree in the nearby woods biding his time, and when that time came he carried off two eggs before Mrs. Pheasant returned. A few evenings later a marauding raccoon took two more and might have cleaned out the nest had not something frightened old ringtail. The remainder of incubating time passed without incident. Except that it was so hot, and that the alfalfa, now overly ripe and scorched, offered little protection.

On the 23rd day the eggs began pipping, and within hours the newly hatched chicks were teetering about all fluffed up like Easter peeps. What a contrast to their hideous appearance a few hours ago when, wet and bedraggled, they first saw the light of day. Soon the family was able to move.

Mrs. Pheasant decided to wait until

late afternoon, then move into the shelter of the nearby woodland. It was excellent strategy because the little island which held her nest was several hundred yards from the woods, several hundred bare, open, dangerous yards. One youngster never made it. A sharp-shinned hawk on a distant stub, telescopic eyes alert to any movement, sped toward the convoy and picked up the last chick even as it started to enter the wooded haven. Four eggs and one chick gone.

Two days later a heavy rainstorm struck suddenly with such violence that Mrs. Pheasant was hard put to collect her brood under the shelter of her protective wings. One straggler, who never heard nor heeded her alarm call, was literally smothered in the downpour and drowned within a few yards of safety.

In nature's law of survival only those who are the strongest and most alert reach maturity. This is her way of maintaining only the healthiest stock for the future. For weeks the family enjoyed all the serenity that normal life afforded, but even that was fraught with the constant need for alertness. More than once the little family was forced to take shelter against winged and four-footed predators to avoid discovery or capture. One afternoon in late summer the





little group was following a shallow and almost coverless gully leading toward a distant planting of evergreen seedlings along a side hill. The seedlings had been planted to halt erosion, but they were still too young and too small to have accomplished this objective. The young birds, about six weeks old, were foraging more widely now, the little gully giving them a better sense of security than actually prevailed. It was during this moment of temporary abandon that the plummeting Cooper's hawk struck. There was a strangled cheep and all was still. The remainder of the family made it to the evergreen sanctuary.

In a period of 12 weeks Mrs. Pheasant's little brood suffered eight casualties. How many more would succumb to one destructive force or another? Time only would tell. And time, in the long slim body of Mr. Gray Fox took a nice fat pheasant chick home to his family late one afternoon. The pheasant family now were only four, mother and three children—her hardiest and most alert. Three progeny to safeguard and perpetuate the good, healthy wild stock. But alas this family history did not end on such an encouraging note. One day, as the four birds were

traversing a sparsely covered fencerow along a highway, they were attracted to the greener pastures of the well planted fencerow on the other side of the road. In anticipation they headed for it. In a flash several mighty engines of destruction were upon them. Only mother and two chicks made it to the opposite bank. One bird in rising crashed into a windshield. Time passed and fall approached bringing with it the beginning of another hunting season. Would the remaining *three birds* survive this onslaught or not?

If you ever question the necessity for wildlife protection, of the need to provide food and cover; of the importance of wise laws; or preventing woodland and brush fires; of planting, not burning or cleaning out fencerows; of placing some travel lanes between fields to provide areas of safety for wildlife on the move—if you ever question any of these things, remember this story of mother ringneck and her brood. It is only hypothetical—but can be true. Nearly every wild bird and wild animal is confronted with so many enemies that it is unusual for any to survive.





Butler County—Training Ground For Junior Sportsmen

By Leonard A. Green

President Butler County Sportsmen's Council

THE Butler County Sportsmen's Council again conducted a one-week Junior Conservation Camp last summer and is planning a third annual camp this year. First of its type ever to be attempted on a county level, the camp is patterned after the Junior Conservation Camp conducted by the Pennsylvania Federation of Sportsmen's Clubs near State College each summer. The Butler County camp has already received national interest and following the first project two years ago, the Council even received a letter from British Columbia, Canada requesting information to be used for a similar camp north of the border.

The 1957 camp was improved over the pilot project conducted in 1956. Competent instructors represented the Pennsylvania Game and Fish Commissions, Department of Forests &

Waters, Pennsylvania State Police, National Civil Defense organization, U. S. Air Force, Butler County Health Service, the county's Agriculture Association, National Rifle Association and other groups interested in conservation. Field trips covered such subjects as tree identification, soil conservation, stream management, water pollution, forest fire prevention. Each camper was examined on the subjects covered in the course and the individual ratings were used by camp counselors in determining the boy who was sent to the State camp at Council expense.

Sportsmen's clubs sponsoring the boys at the Butler County camp included: Boyers Sportsmen's Association, North Butler County Hunting and Fishing Club, Slippery Rock Sportsmen's Club, Saxonburg District Sportsmen's Club, West Winfield Rod



CAMP COMMITTEE consisted of, seated, left to right; District Game Protector W. E. Portzline, Leslie Bell, Leonard A. Green, District Game Protector Paul R. Miller and Fish Warden Cliff Iman. Second row: Floyd Duespohl, Harold V. Critchfield, Merle Bauldoff, Dean Campbell and Peter S. Green. Absent when picture was taken were Kenneth E. Weitzel and Joseph Fair.

and Gun Club, Evans City Sportsmen's Club, Zelienople-Harmony Sportsmen's Club and the Butler City Hunting and Fishing Club. The junior was required to pay \$5.00 and the sponsoring club paid the addi-

tional balance of \$20.00 to defray school expenses. Each boy was provided with a colorful sleeve emblem, a gold-edged diploma, and a 72-page camping handbook.

The camp was conducted at the



ON THE RANGE all boys qualified in the NRA hunter safety course and received instruction on all types of firearms.



CLASS OF 1957 at the Butler County Junior Conservation Camp.

North Butler County Sportsmen's Club Farm, "Walley's Mills." Camp Counselor was Floyd Duespohl of Petrolia, assisted by Joe Fair of North Washington. Attending were: Anthony Sack, David Stoops, Dave Rentz, Paul Isaly, Skip Stahl, Phillip Heuitt, Thomas Hoover, James Robinson, Jerome Green, Gordon Leech, Kenneth Smith, Bill Woods and Don Croll. Balanced meals prepared by the campers were augmented by a main meal provided daily by the Ladies Auxiliary of the Washington Township Fire Company.

Members of the 1957 Junior Camp Committee included: Leonard A. Green, Chairman; Leslie Bell, E. W. Ellenberger, Dean Campbell, Merle Bauldoff, Peter Green, Harold Critchfield and Kenneth Weitzel. Council officers were: Donald Wimer, President; William Rhodaberger, Vice-president; Russell Cress, Secretary-Treasurer.

New Federal Duck Stamp Design Chosen

A black and white wash drawing featuring several Canada geese feeding in a picked cornfield in the upper Midwest country has been chosen as the design for the 1958-59 Migratory Bird Hunting Stamp. Leslie C. Kouba, of Minneapolis, Minnesota, is the artist who drew the winning design for the ninth annual "duck stamp" competition.

This will be the 25th stamp to be issued in the Federal duck stamp series. The first stamp went on sale in 1934. A new duck stamp is issued each year by the Post Office Department which is in charge of its distribution and sale. It goes on sale about July 1 and expires on the following June 30. Nearly twice the size of a special delivery stamp, it sells for \$2.



FIELD NOTES



Every Deer Has Its Day

WESTMORELAND COUNTY—

This past month brought several deer fatalities of the usual type—accidental death while colliding with an automobile in motion on the highway. It also brought one somewhat unusual. A doe was bumped (no damage to car or deer because driver had time to slow down almost to a stop) on Rt. 28 at Harmarville across the river from Oakmont. She then crossed the Penna. RR tracks and swam the river almost unnoticed, apparently taking refuge in the brush along the bank on the Oakmont side. The next day, however, she stirred up quite a rumpus by proceeding up Hulton road and jumping through the first plate glass window she saw—the showroom of an auto dealer. The several autos on display were undamaged. A wrestling match ensued in one corner between the deer and one brave member of the sales staff resulting in quite a few black and blue marks. Deputy Charles Rupert who operates a service station in the vicinity was summoned and he removed the badly injured deer. Do you suppose she was trying to get back at one of those shiny critters parked in the showroom window to make up for the bump she received the day before?—District Game Protector, Carroll R. Kinley, New Kensington.

Love At First Sight

CENTRE COUNTY—On March 31, I witnessed the first of the season's grouse courting. One male took possession of a township dirt road and refused to move. I stopped the car and watched him strut for the entertainment of two females.—District Game Protector, Joseph W. Kistner, Howard.

A Rose For Wildlife

BUCKS COUNTY—On March 28th while at State Game Lands No. 205, I saw a hen pheasant, a rabbit, a quail and a cock pheasant, in that order, in a multi-flora rose fence. The pheasants were only about twenty-five feet apart and the rabbit and quail were between them. Seeing the three species of game so close together made a rather unusual picture.—District Game Protector, E. W. Flexer, Quakertown.

What Is That Geese?

FRANKLIN COUNTY—I had a call asking if there was a season on Hungarian Wild Geese. The man stated that there was a flock out in his wheat field and that a friend had told him that they were Hungarian Wild Geese. I told him that if there was any geese in his field whatever nationality, there was a season on them and it wasn't in now.—District Game Protector, Edward W. Campbell, Ft. Loudon.





Ringtailed Robber

COLUMBIA COUNTY—During the summer of 1956 a carnival showing in Berwick had the misfortune to have a ringtailed cat escape from its cage. It was seen in various parts of Berwick for a couple of weeks and then disappeared only to reappear this winter, after the deep snow of February, when it was caught by a fox trapper on Knob Mountain in Center Township, Columbia County. It retained its same sleek appearance even after living for over a year in country not considered to be native to this species of cat.—District Game Protector, Lewis H. Estep, Berwick.

Where There's Prey . . .

GREENE COUNTY—I have heard more than one person say that where there are predators, there is always game. That is true but mis-stated. It should be "where there is game, there are predators." The predators no doubt move to where the best pickings are. Last fall we took the predators off State Game Lands No. 179 clean until not one fox was killed on the Game Lands during hunting season. This spring it was again necessary to take about two dozen foxes from the same territory that was cleaned last fall.—District Game Protector, John F. Blair, Waynesburg.

Where There's A Will . . .

CENTRE COUNTY—"Never say die," seems to be the motto of the Dark Hollow Campers, a crew from Carrolltown, Penna. This camp is located on the Fisher Road which is near the boundary, north of Centre County. Chuck Ertter, Secretary, kept me posted on their feeding activities, upon request. Briefly, the story goes something like this: "Received corn in State College, March 2, from this officer. The seven of us tried to get to camp with the two jeeps, but after leaving Rt. 144, we only got about 1 mile and found that the snow was over 2 feet deep. Returned to intersection of Fisher Road and Rt. 144 on 3/7 but found conditions about same as 3/2. Returned 90 miles home. Came back on the 9th in two planes. Flew out of Moshannon Airport to drop 16 bags of corn on bare mountain sides. 3/18 the Fisher Road is open to camp, all feeders filled. It took us 6½ hours to get from camp to Rt. 144." Hats off to a crew that would work so hard in the name of conservation.—District Game Protector, Charles M. Laird, Pleasant Gap.

A Woman's Work

LUZERNE COUNTY—While eating lunch at a diner, a sportsman was bragging about how much snow he had shoveled during the snowstorm that we had last February. He was very loud and boastful. Along came another man and related this story. He stated that a lady was snowed in and that she had about a mile to shovel herself out to the nearest house. She went to work but the shovel that she was using was too heavy. She then went into her home and got her dust pan and proceeded to shovel her way out. After the sportsman heard this story, he left the restaurant. This proves that more work is accomplished by the hands than by the lips.—District Game Protector Edward G. Gdosky, Kingston, Penna.

Point A Polecat

MONTGOMERY COUNTY—The spectators got a few laughs at a recent Field Trial held at State Game Lands No. 205, when one of the dogs, instead of pointing a pheasant, pointed a skunk. The dog then proceeded to dig it out from the hole and dispose of it, but not before the skunk had delivered its perfume! There is one thing which makes this job of being a wildlife conservation officer interesting and that is that there is always something unusual happening in your district. As the old saying goes, "there is always a first time for everything." On March 1, 1958, Mr. Harold C. Schwoyer, Perkiomenville, Pennsylvania was driving his car down Route 29 when at a point about a mile south of Perkiomenville he saw an animal dart in front of his car, which he hit and killed. Upon getting out and investigating he found that he had killed what he believed was a coyote. He brought the animal to my office for identification and after checking it over I agreed with him on the identification. The coyote measured close to three feet long and weighed twenty-seven and one half pounds on my scale. This female coyote was killed within twenty-five miles of Philadelphia and upon talking it over with my Supervisor I found that he had no reports of coyotes being killed in surrounding counties. How this one got down here I don't know.—District Game Protector, W. E. Shaver, Mainland.



Crow Hunting Champions

DAUPHIN COUNTY—Six Millersburg crow hunters killed a total of 3,348 crows, during the season which is about to come to an end. These gunners say their average is nearly two shotgun shells per crow. With the large number of crows killed each year the number never seems to decrease, as tens of thousands of them are seen in this area each fall. The gunners and their scores are: Dean Latsha, 816; Richard Manning, 705; Richard Sweigard, 567; Eugene Sweigard, 512; Dick Spicher, 471; and James Snyder, 277.—District Game Protector Harold F. Harter, Lykens.

And They Wonder Why

PERRY COUNTY—The people of this district keep asking me why can't we get the turkey back in this county and one of my stock answers was that the country was too accessible and had heavy hunting pressure. But I am just about to add another important item to that list, or at least it seems as though there is another answer. It seems as though there are people in this world that just can't stand to see anything alive in the woods that they don't have to take a shot at it. Just about every three days I get the report of spring turkey hunters in this district. How can we have anything if this keeps up?—District Game Protector, Russell Meyer, Blain.



Nuts About Corn

COLUMBIA COUNTY—We are of the opinion that cooperation does pay, even when done unwillingly. Deputy Derrick, while hunting foxes recently, stopped at some distance from a turkey feeder on State Game Lands No. 226, and was observing the numerous squirrels free loading on the corn. On several instances a squirrel carried an ear of corn away from the crib, which is protected by a pole barrier to keep the deer from cleaning up the corn underneath. Immediately a deer would give chase, the squirrel would drop the corn and the white tail would take over from there.—District Game Protector Mark L. Hagenbuch, Bloomsburg.

Get Along Little Doggie

LYCOMING COUNTY—On March 24, 1958, a group of dogs ran five deer all through the borough of South Williamsport. The deer went through the back yards and alleys, sending the residents for cover. One of the five was killed when it ran out onto the street into the path of an automobile. At last report the dogs were taking the deer out of the borough into the mountains.—District Game Protector, Paul A. Ranck, Williamsport.

Bunny In The Barn

BERKS COUNTY—On March 5th, while stocking rabbits in Farm-Game Project No. 129, I stopped at the farm of Isaac Mast. We decided that the best location to release them would be behind barn where rabbits

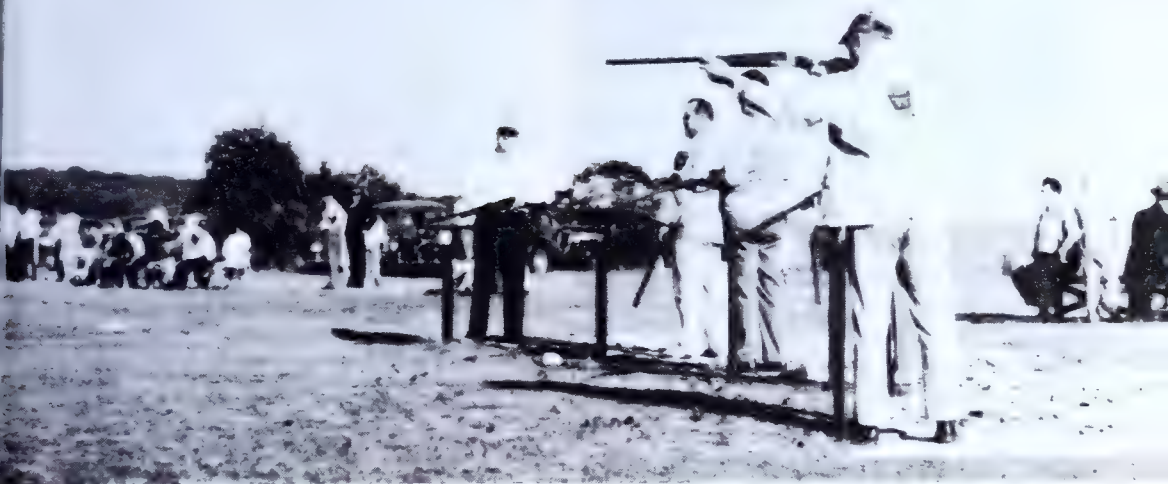
would have a chance to follow the fence lines. Five rabbits followed our line of reasoning and took off along the fence lines. Number six was the maverick. It stopped, took a good look around and made a beeline for the barn bridge. The large doors were open and the rabbit ran right in on the barn floor. Mr. Mast and I took off after it. It is really surprising how a small rabbit can make such a fool of two adults. We chased the rabbit back and forth on the barn floor, around implements and bales of hay and straw for at least fifteen minutes before it finally left the barn. On one occasion it did run out the door, looked around and darted back in again. The snow of March 19th and 20th of 1958, will linger in many memories like the flood of March 17, 1936. In the southern part of this District the total fall was measured from forty to forty-eight inches. It was a wet snow and there was very little drifting. Fortunately, the weather warmed immediately afterward but the weight of the snow caused much suffering and damage to the human population. It may also have caused some loss to our wildlife but we have no authentic reports of any serious loss so far. I believe the birds and animals have more sense than their human brethren. They stay quiet and don't try to move around for several days. In that length of time, the warm sun has caused some melting and food is available.—District Game Protector, J. A. Leinendecker, Reading.



The Sport Alluring . . .

Shooting Clay Targets

By A. J. MacDowell



Follow it not along the sky,
To Take a formal aim, but try
To draw the trigger just as you
At gun's end the object view.
Nine times in ten the gun is right
At first obeying well the sight;
But if you look, and look again,
And doubt and waver it is plain
Your hand has every chance to be
Betrayed by such uncertainty.

Proceed then, as I just have taught,
The pleasing knack will soon be
caught;
But let me re-advise, for this
Prevents, I'm certain, many a miss.

Close neither eye; some good shots
say,
Shut up your left: well, that's my
way.
And I'll stand by it, will take an
oath,
You'd better shut one eye than both.

If you're collected, I believe
Your eye will ne'er your hand de-
ceive.
I mention this that you may see
How motion doth with sight agree.

IN this poetic effort—composed
many long years ago, I was trying
to point out how motion—the steady
moving of the gun to a moving ob-
ject—will agree with your sense of
sight and sense of touch. In other
words, if you are calm and collected
when you point or move your gun
at a moving object in the field, at
skeet, or at the 16-yard traps, the
point of your gun will find the ob-
ject and get there in plenty of time.
This won't happen, however, if you
shoot when you are off-balance—
shooting from your right foot instead
of your left, for instance.

How many times in field shooting
can you remember taking that extra
step with your left foot in order to
bring the gun into the proper place
on your shoulder. When a game bird
flushes, the experienced hunter auto-
matically does this, usually so fast
and automatically that he is not con-
scious of the movement. It happens
many times when you are not fortu-
nate in having a good dog on point to
show you where to expect the rise. It
took me about five years to acquire
this habit.

But many are the times when you

have shot too fast. The gun was not properly seated; you were standing square on both feet and sometimes you were so startled that you shot from a rearing back position instead of a forward position with your weight or balance forward where it belongs.

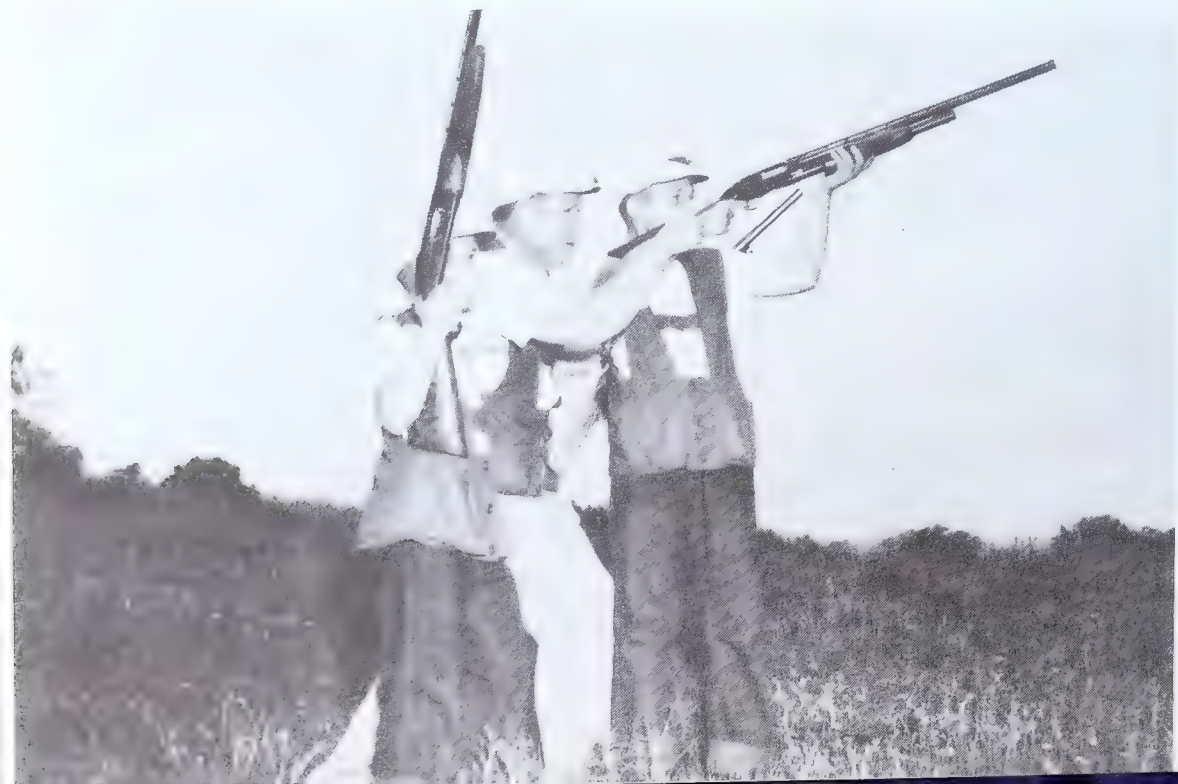
In trap shooting it is of utmost importance to acquire the correct shooting stance. You should be standing erect with your body almost parallel to the trap house—weight forward on your left foot, cheek down firmly to the stock and forward rather than straight up, gun seated tight to the shoulder, elbow at right angles thereto, three fingers and thumb gripped tightly around the grip of the stock, trigger finger through to the first joint (not the tip of the finger), left hand forward in a comfortable position. Then you give a sharp, quick call of “pull.” Your command should be formed and uttered from the throat, not from all the way down inside your stomach. This will speed up your reflexes and proper timing will come naturally.

I have taught many men and women how to successfully shoot clay targets. I have convinced myself and those with whom I've worked that the fitting of a gun is as important to the user as the fitting of a suit of clothes or a hat. You can fit yourself with a gun and do a pretty good job of it. Better still is to have a good instructor help you. But the very first step is to decide what you are going to do most with a gun. Let's consider field shooting.

Too many people just walk into a store and buy a gun with no thought, or at least not very much thought, of its adaptability to the person buying the gun or for what purpose it will be used most. For field shooting—tramping the fields and woods for upland game—the gun weight should be light enough so that the shotgun feels alive in your hands. I suggest 26 or 28 inch barrels for all-around use with improved cylinder or modified choke. Personally, I favor improved cylinder and a 12 gauge gun.

A most important factor in making your selection is the stock. Never choose a stock so long that you have

CORRECT SHOOTING STANCE is of utmost importance in trap shooting. Body should be erect, weight forward on left foot and cheek down firmly on the stock.



to stretch or make more than a comfortable effort to reach the trigger. On the other hand never take a stock so short that your nose touches your thumb when it is in position around the grip with your forefinger riding the trigger.

You can fit yourself by seating the gun to your shoulder with your eyes closed. Now open your right eye (if you shoot from the right shoulder). Are you looking flat down the barrel or barrels to the front sight with little or no adjusting of your face on the stock? If you are looking down on the barrel, the top of the stock or comb is too high. It should be taken down until you can look flat down the barrel with no or very little adjustment. If, on the other hand, you are down so far that you cannot see the front sight and are looking at the breech of the gun, the comb of the stock must be raised.

To determine correct length of stock, you should seat the gun to your shoulder. While looking flat down the barrel, your nose should be about one and a half inches back from the thumb as it is placed around the grip in natural shooting position. If your nose is almost touching your thumb, the stock is too short. If the nose is further back than one and a half inches, the stock is too long.



Photo by Leonard Lee Rue.

PROPER POSITION is just as important in hunting as it is in trap shooting. If you are calm and collected when you point the gun at a moving target, the chances for a clean hit are increased considerably.

People are not built alike yet most of the guns built by manufacturers for the general market are alike in stock dimensions. It's up to you to make the gun fit you as an individual. This can be done with the little effort and thoughtfulness outlined above. Shooting can be fun and it's a great thrill to shoot well. You can shoot above the average but you must first be properly equipped.





CONSERVATION DISPLAYS including relief maps showing Pennsylvania's state forests, parks and game lands were but a few of the projects carried out by the Junior Sportsmen's Club at Farmdale School in Lancaster County.

Learning Good Sportsmanship

By Robert G. Miller

FOR the second consecutive term, the Farmdale elementary school in the Hempfield School District, of Lancaster County, has featured among its special activities a Junior Sportsman's Club.

As the first organization of its kind in the county schools, the club was initiated during the middle of the 1956-57 school term by the principal, Richard D. Brubaker, Mount Joy R1.

Established according to a list of recommendations set forth in a booklet issued by the Pennsylvania Game Commission, the club was open this year to sixth grade boys and girls. Last year's membership was confined to the boys but a number of girls

became interested and were permitted to join the 1957-58 club.

The only unfortunate angle is that the members enter junior high school, the following term, where there is no such organization which would enable them to continue their work in conservation and the like. However it is the hope of Brubaker that a similar club may eventually be established in the junior-senior high school.

Brubaker, an ardent sportsman with an intense interest in hunting, fishing, archery, etc., finds there is a definite need for a junior sports club as more and more individuals and families, tired of being glued to a

television set, take to the outdoors for much needed exercise and recreation.

Unfortunately, as Brubaker explains it, the 1956-57 club was not organized until the middle of the term and it took most of the remainder of the term in getting set up.

However the youngsters, numbering about 20 that year in comparison to nearly 30 this year, did manage to complete several projects including bird boxes and feeders, fly tying, building small shelters on surrounding farms, maintaining feeding stations, etc.

Meetings are held twice monthly, right after school hours, with special speakers or projects at each session.



JUNIOR SPORTSMEN display results of some personal work projects. Left to right: Russel Weidman shows his bird feeder made of scrap lumber, Vincent Habel exhibits a well built bird box, and Robert Nolt, Jr., shows his wire feeder used for pheasants and squirrels last winter.

Occasionally Parents Night is observed and this gives fathers and mothers a chance to observe the accomplishments of their children. Past sessions have featured a fly tying demonstration, an outline of "The Ten Commandments of Safety" by a district game protector prior to the small game hunting season, and films on hunting and fishing in Pennsylvania.

Projects this year were topped off by two relief maps of Pennsylvania. One shows all the state park areas and the other indicates the location of game lands. Projects of usefulness to the surrounding farm area, especially involving small game propagation, are also being worked on while Brubaker hopes to set up an archery range for some supervised shooting as interest in archery continues to mount year after year.

The establishment of such an organization is quite simple and interesting, and is within the means of any teacher provided he or she is sportsman enough to spend a few extra minutes per month teaching the rudiments of good sportsmanship.

A sample constitution is provided in the booklet, issued by the Game Commission, which can be followed in preparing the individual club's constitution and by-laws. There are also a number of helpful hints for stimulating interest in the club and suggested monthly programs for each meeting.

The Farmdale school is a modern building, in a rural setting, with most of the club members, ranging in age from ten to thirteen years, coming from farm or suburban homes. Perhaps, under these conditions, one might wonder why a club of this type is necessary and would prove more valuable in a city school where youngsters have few, if any, chances of becoming acquainted with outdoor living.

As Brubaker points out, there are

4-H clubs for farm youth which provide the necessary training in raising baby beef, dairy work, pig and lamb clubs, etc., but there is no training to prepare a youngster for outdoor sports.

The school principal, who is especially fond of small game hunting, points out that qualified training is necessary before a driver's license is issued so why not the same type of training in the safe handling of firearms before that same youngster is given a .22 caliber rifle for varmit shooting, or a shotgun for small game. Receiving a hunting license should not just be a matter of filling out a form and paying a fee but

everyone who receives a license should be backed up by some adequate form of training, and this is one of the basic purposes of the club.

Brubaker also found the Farmdale club serves a two-fold purpose. Not only does it provide training in conservation but is quite helpful scholastically.

When the club was formed pupils were warned that poor grades would automatically eliminate their membership in the club. As a result some pupils who previously had little interest in school and were nearly failing in some subjects, soon brought their marks up to par in order to participate in the club program.

WEST VIRGINIA CONSERVATION GUIDE POPULAR

"Living, Learning, Loving West Virginia," an 80-page teachers' guide to conservation, first published last year through the efforts of the State Conservation Commission and the Department of Education, continues to generate conservation interest in the Panhandle State, the Wildlife Management Institute reports.

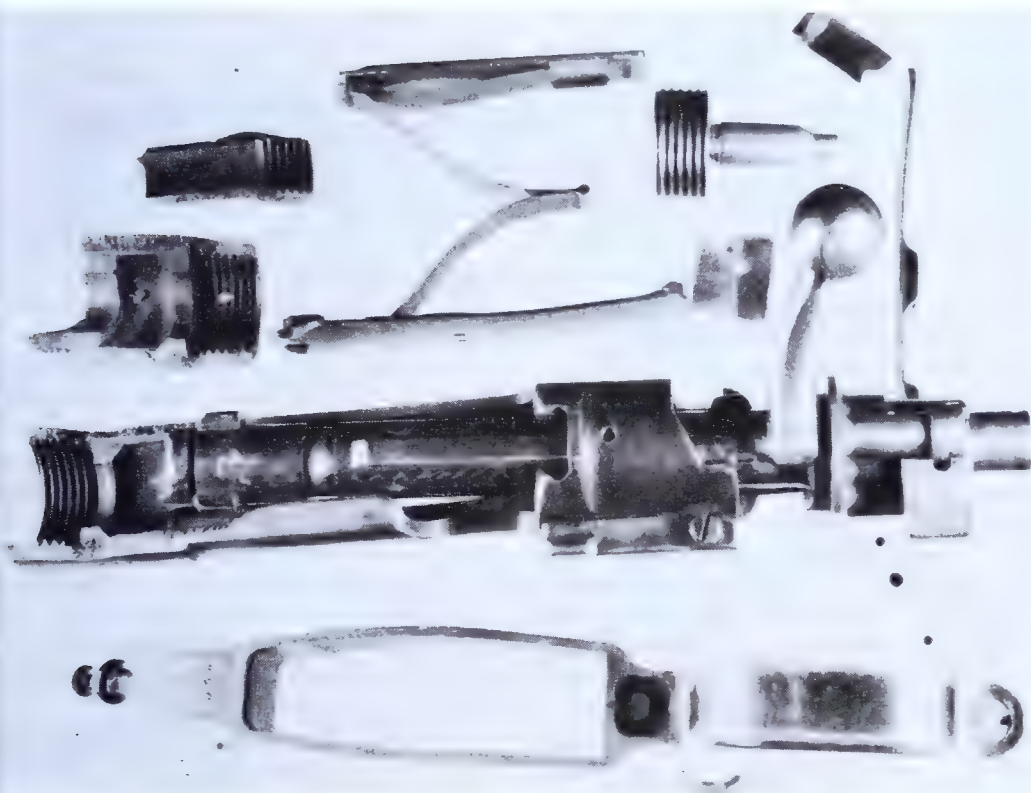
Requests from teachers and others necessitated the printing of an additional 10,000 copies, making 32,000 printed within a year. About 50 per cent of the State's schools are teaching conservation from the handbook, and a two weeks workshop for teachers this summer at West Virginia University will feature its use in the classroom. All inquiries should be sent to the Conservation Commission in Charleston.

NEW GUIDE TO CONSERVATION EDUCATION MATERIALS AVAILABLE TO TEACHERS

"*Materials for Teaching Conservation and Resource-Use*" a 55-page bulletin has been prepared by the National Association of Biology Teachers and is now available for 35 cents from Interstate Printers and Publishers, Inc., Danville, Illinois.

The bulletin includes listings of free and inexpensive materials from state and national agencies, selected references, films and film strips, prepared by various members of the Conservation Committee of NABT, according to Dr. Richard L. Weaver of the University of Michigan, chairman of the Committee.

The new materials listed in this bulletin were assembled as the appendix of the *Handbook for Teaching Conservation and Resource-Use*, reprinted in January by the Conservation Committee of the National Association of Biology Teachers. The Conservation Handbook of 500 pages is also available from Interstate Printers and Publishers for \$4.50, with educational discounts available to schools and teachers.



Sometimes They Blow!

By Bob Bell

TAKE a look at the photo accompanying this article. Now ask yourself how you'd like to be the fellow who squeezed the trigger for the shot that turned an excellent varmint rifle into the scrap that's shown. Such a prospect probably doesn't appeal to you—I know it wouldn't to me—but I did it and I'll tell you about it. Possibly my few remarks will help keep you from ever doing something similar.

A few background remarks might help understanding. I've been interested in guns all my life and obtained my first custom-built rifle in 1946 when I got out of the Army. I had three more of various calibers built between then and 1950, and in this year I decided I wanted a rifle

chambered for a different cartridge than any I had used to date. When I made my choice—what I picked doesn't matter; it had nothing to do with the accident—I started looking around for an action. It had to be a bolt action. No other design, except possibly the single-shot, which I don't care for, would give the desired accuracy. This meant that it could hardly be a commercial American action as no American arms company sells actions separately and I couldn't afford to buy a complete rifle and then discard the barrel and stock. The actions most easily procured then were the German military M-98 Mauser and the American-made M-1903 Springfield and M-1917 Enfield.

Except for large Magnum-type

cartridges, the Enfield is too big an action to suit me, so it was eliminated from consideration. There is little to choose between the '98 Mauser and '03 Springfield, but several design features give the Mauser a slight edge. So that's what I decided to use.

While looking around for a good military action, I happened to meet an ex-GI with a pre-war commercial Mauser sporter, barreled for a 9mm cartridge, which he was willing to sell very reasonably. This was an extremely smooth action with a mottled, case-hardened appearance which was attractive, and it had double-set-triggers, a fine addition to a varmint rifle. I bought the rifle, removed the barrel and stock, and used the action as the basis of my new rifle. It turned out to be an extremely accurate outfit, and during the summer and autumn of 1950 I killed many crows and chucks with it and shot it some on the bench. However, after considerable use I found that I didn't care for the set-triggers so I replaced them with a Mashburn adjustable trigger. I had approximately 1200 rounds through it when one day I happened to look out of my bedroom window toward the top of a steep wooded hill which was a short distance from the house. (I lived with my parents then, several miles out of town; there were no close neighbors.) There was a crow sitting in the top of an oak tree on the hill, about one hundred and fifty yards away. I thought I would just knock it out of the tree, so I took the rifle from the gun cabinet, picked up a couple of cartridges, and opened the window. My shooting glasses were in the cabinet, but I didn't use them. After all, I was only going to fire one shot.

Sitting on the floor, I could rest the back of my left hand on the window sill and get a solid position. I put the cross hairs of the big Unertl scope on the crow and squeezed the trigger. I killed the crow, but it hung up in the thick branches of the oak, so I ran in another cartridge, think-

ing I might as well knock it out of the tree.

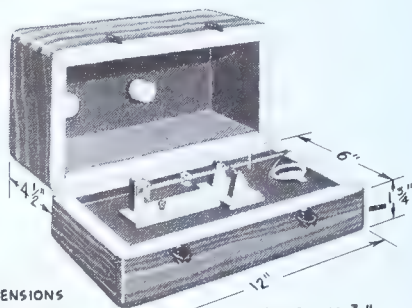
At the second shot a blast of gas hit me in the face. It felt as solid as the edge of a board. I sat there with my eyes tightly closed, the smell of burned powder around me, my ears ringing wildly, wondering what had happened. The report had sounded unusual. I must have popped a primer, I thought.

My face didn't hurt, but it stung a little. I ran my hand over the gun. I felt splinters on the stock and then rough pieces at the action. My eyes were still shut and now I was almost afraid to open them. I knew if the gun had blown up, by all the rules I should have been hurt. I also knew that until the first shock wears off, you don't usually feel pain. Finally I made a conscious effort and opened my eyes. I could see.

I looked at the gun. It was a mess. I went to the bathroom and looked at my face in the mirror. It was red,

build a case for your powder scales

JUST - FREE SCALES MAKES FOR INCREASED EFFICIENCY IN YOUR LOADING OPERATIONS.



MATERIAL IS $\frac{3}{4}$ " WHITE PINE.

DIMENSIONS GIVEN ARE ONLY SUGGESTIONS... MAKE THE CASE TO FIT YOUR OWN SCALES.

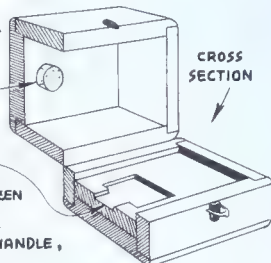
SPONGE RUBBER DISCS TO HOLD SCALES IN PLACE.

CHISEL OUT $\frac{1}{4}$ " DEEP POCKET TO FIT BASE OF SCALES.

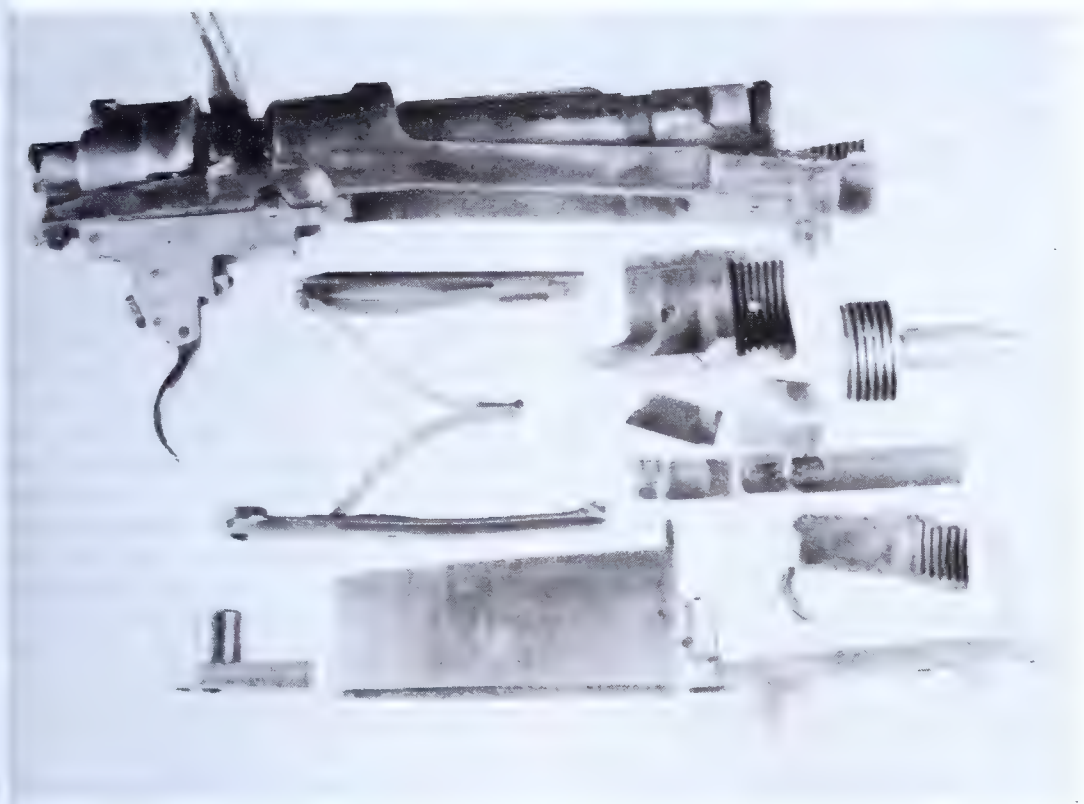
LINE CASE WITH GREEN FELT.

ATTACH CARRYING HANDLE, HINGES, & CATCHES.

FINISH WITH VARNISH.



JOHN F. CLARK—B



as if I had a fresh sunburn, and it was bleeding from half a dozen small cuts. My eyes were bloodshot. They felt somewhat tender, but seemed to be all right. However, my parents insisted that I should go to the doctor and I didn't argue the point. Dad drove me to the Geisinger Memorial Hospital in Danville.

With a roomful of intricate optical equipment at their disposal, several doctors gave my eyes a careful examination and located a number of small pieces of brass imbedded in them. The left one had more than the right; possibly the scope had protected the right one to some extent. The doctors decided that as many as possible of these brass particles should be removed. You can take it from me that spending several hours looking directly at the point of a steel pick, and feeling it tug gently at your eyeball, is not the most enjoyable way to spend an afternoon. Afterwards, while I was spending almost a week with my eyes covered, I spent considerable

time thinking of those impact-resistant shooting glasses in the gun cabinet.

After a period of time I got around to examining what was left of the rifle. The stock was splintered, the action shattered, and the Unertl scope looked as if it had been designed to use on one of those German WWII guns that shot around corners. The barrel looked all right, but several gunsmiths advised against using it. In other words, the rifle was scrap. The only salvage of value was the Mashburn trigger.

When considering this accident, the questions that immediately come to mind are: Why did it happen? What made the action shatter?

I was using heavy, but not maximum, handloads. It was a load I had used for at least a thousand shots with no trouble whatsoever. There had never been any sign of excessive pressure—no sticking cases, no popped primers, nothing out of the ordinary. There was no obstruction in the bore—the previous shot had killed

the crow. Therefore, the load did not seem to be at fault.

Since I didn't think I knew enough about it to get a satisfactory answer myself, I put the pieces in a box and took them to Phil Sharpe, internationally recognized gun authority, whom I had known for some years, and asked his opinion. In his findings, which cover two and a half single-spaced typewritten pages, he explains the sequence of events as he deduced them from his examination of the pieces and, more important, he tells why he thinks it happened.

In summary, it would seem that this action was one of the thousands made up somewhere in Germany during the period between the two world wars and sold in the white to gunsmiths throughout the world. *There was no maker's name on the action.* In other words, while it appeared to be a quality M-98 Mauser action, whoever manufactured it did not think enough of their reputation to admit producing it. I should have noticed this myself, before ever using it, but I didn't. Also, I should have realized that the chances were excellent that a case-hardened bolt action would be brittle. It is impossible, at least for a small manufacturer, to heat-treat an action such as an M-98 which has many internal and external cuts, making metal of varying thickness throughout, so that the relation of hardened skin surface to core will remain constant.

Sharp's examination revealed that in attempting to case harden this action, the unknown gunsmith burned the metal, allowing the rupture to develop slowly, beginning at about the level of the top of the right side rail. When the break finally occurred, even the naked eye could see that the inner part of the break, for about half of the thickness of the metal, was old and dull, while the outer half was shiny and new. This action had never been safe from the moment of case-hardening.

To wind it up, we might ask what

is to be learned from such an accident. Does this mean that guns just aren't safe? Of course not. Millions are in constant use and never give any trouble. Does it mean we should avoid all custom-built rifles and handloaded ammunition? No. The only other blown-up rifle I've ever known about was a top-grade American make using factory ammunition. It didn't break up as badly as this Mauser did, but the shooter was hurt more.

What we should learn is that accidents are possible; therefore, we should do everything in our power to prevent them. If using factory rifles and ammunition, be positive you are using the correct cartridges for your gun. And always make certain the bore is clear before firing; check it before you begin hunting and check it whenever there's any possibility that it got plugged—after a fall, for instance. If you're building a rifle to suit your own ideas, remember that the action is the heart of the gun. If there is any doubt at all in your mind about the safety of the action, don't use it. Pay a little more, if you must, to get a product of one of the world-recognized manufacturing concerns. They have generations of experience and know-how, their inspections are strict, and they have a reputation to maintain. They don't turn out bad stuff. By the time you've taken a war-time action, for instance, and worked it over until it's suitable for a sporter, you have the price of a commercial action in it and you have a lot more time and effort involved. Not that many military actions are bad; most of them are very strong. But all of them need considerable work. It's simpler in the long run to buy a good commercial action, then you don't have any worries on that score. And if you take normal precautions, you won't have to ever worry about blowing up a gun. It happens so rarely that few people ever hear of one. You have to be jinxed maybe. Like me.



CONSERVATION NEWS



Pennsylvania's 1958 Beaver Season Yields 2420 Pelts Despite Weather

During the 1958 beaver season, February 15 to March 15, Pennsylvania trappers caught 2420 of the flat tails. This was about 500 less than the number taken in 1957, and was about 700 below the average for the previous five seasons. The large fur animals were reported to be as numerous this year as last. But deep snows, thick ice and difficult road and foot travel during the season, combined with the continuing low price of fur, aroused concern lest too

few beavers would be cropped from an already large population. All things considered, the take is considered satisfactory.

Forty-five of the 67 counties yielded beavers during the recent season. Once again Crawford led, with 331. Other counties in the 100 or more class were: Wayne, 191; Potter, 165; Susquehanna, 158; Bradford, 142; McKean, 116; Tioga, 113; Elk, 103; Erie and Luzerne, 102 each; and Sullivan, an even 100. The remaining counties tapered down the scale, three of them registering a single animal. Beaver, the county that bears



PGC Photo by Bob Parlamen.

PART OF 1958 BEAVER HARVEST is displayed by fur dealer Bill Jackson of Conneaut. Crawford County again led the State with a catch of 331 broadtails.

the name of the aquatic rodent, yielded 7.

The beaver catch is tabulated from the number of skins sealed by Game Protectors within 10 days following the close of the season, as required by law. Pelts of beavers taken in Pennsylvania may not be sold or otherwise disposed of until properly tagged.

The harvest by counties was as follows:

<i>County</i>	<i>No. of Beavers</i>
Armstrong	12
Beaver	7
Bedford	3
Bradford	142
Bucks	1
Butler	7
Cambria	17
Cameron	19
Carbon	1
Centre	10
Clarion	30
Clearfield	79
Clinton	52
Columbia	11
Crawford	331
Cumberland	1
Dauphin	6
Elk	103
Erie	102
Fayette	11
Forest	66
Fulton	10
Indiana	3
Jefferson	19
Lackawanna	41
Lawrence	7
Lebanon	3
Luzerne	102
Lycoming	51
McKean	116
Mercer	41
Monroe	26
Pike	52
Potter	165
Schuylkill	9
Somerset	4
Sullivan	100
Susquehanna	158
Tioga	113
Union	5
Venango	31
Warren	80
Washington	3
Wayne	191
Wyoming	79
TOTAL	2,420

Commission Announces Changes In Field Division Headquarters

Recent changes in staff assignments at various Field Division headquarters have been announced by the Game Commission with the approval of the Governor's Office. W. J. Brion, formerly a District Game Protector in Allegheny County has been promoted to the position of Conservation Information Assistant, Southwest Division, replacing Richard W. Orr. Mr. Orr has been transferred to the Southeast Division with duties as Law Enforcement Assistant in the Reading office. A. C. Ganster, formerly a District Game Protector in Franklin County has been promoted to the position of Bounty Claim Agent with headquarters in Harrisburg.

Deputy Game Protectors Recommissioned

On April 25, the Pennsylvania Game Commission appointed 1335 Deputy Game Protectors. The commissions bestow authority on these men to assist their District Game Protector with Game Law enforcement and numerous other incidental phases of wildlife conservation work throughout the year.

The Deputy Protectors, regardless of their term of service (which in many cases extends 25 years or more), were in each instance selected by written examination after qualifying in other respects. They are chosen, too, on the basis of need for such officer in the sector in which they live and an existent vacancy in the quota for the area.

Deputy Game Protectors operate on a non-paid basis, unless specifically employed for special duties by written order of the Executive Director. Their primary objective is to contribute a service toward the cause of continued good hunting and trapping in Pennsylvania.

In Memoriam



Raymond L. Schroll, Jr.

Fish Warden Raymond L. Schroll, Jr., of Montoursville, died in the line of duty on April 6, 1958.

Accompanied by District Game Protector Paul Ranck, of Williamsport, he was on a boat patrol of the Susquehanna River between Muncy

and Williamsport. As their boat neared a dam sluice at Williamsport, strong currents or submerged debris capsized the boat, throwing both men into the rain-swollen river. Ranck narrowly escaped with his life. He was rescued by city firemen who had lowered ropes from a railroad bridge about a mile below the scene of the accident.

Mr. Schroll was appointed a fish warden on June 23, 1952 by the Pennsylvania Fish Commission. He was born September 11, 1927 and graduated from the Codorus Township High School of Glenville in 1945. Prior to his employment with the Fish Commission, he had served as a Deputy Game Protector in York County. During World War II he served with the U.S. Navy aboard the aircraft carrier U.S.S. Midway. He is survived by his parents, a wife and two children.

Ray Schroll was respected and greatly admired by all who knew him. His tragic death showed a devotion to duty characteristic of many conservation field officers serving the sportsmen and citizens of this Commonwealth. They have lost a loyal friend while the Pennsylvania Fish Commission has lost a highly capable and conscientious officer.

FLIGHT SPEED OF GAME BIRDS

The speed at which game birds fly has always caused a great deal of discussion among outdoorsmen. An authority on the subject offered some interesting comments in a recent Remington Arms Company news release. He said:

"The speed of an upland game bird in flight depends on a number of conditions. When unmolested its flight is slower than when frightened by a hunter. The same applies to migratory waterfowl. But even when frightened all birds of any particular species do not fly at the same rate of speed.

"Here are some figures on flight speed of unmolested game birds, computed from the findings of a number of researchers. They may not be exactly correct, but they constitute the best information we have to date on the subject. Dove and plover, 34 miles per hour; curlew 38 m.p.h.; quail, prairie chicken, ruffed grouse, jack-snipe, mallard, black duck, spoonbill, pintail, wood duck, widgeon and gadwall, 41 m.p.h.; swan, 45 m.p.h.; Canada goose and brant, 48 m.p.h.; green-wing teal, 79 m.p.h.; redhead 82 m.p.h.; blue-wing teal, 89 m.p.h.; and canvasback 94 miles per hour."

Rabbit Drivers Honor Golden

An unusual-type gathering of 250 men middle aged or older gathered at Shartlesville April 12, to honor M. J. Golden, Executive Director of the Game Commission. They also renewed friendships, enjoyed a sumptuous Pennsylvania Dutch dinner and recalled events of 20 to 25 years ago.

Almost all in attendance participated in the now famous rabbit drives conducted by Golden and other Commission personnel, largely in the 1930's, on Reading's Ontelaunee Watershed. Early in that decade small pines, weeds and grasses on the property provided ideal habitat for cottontails. Thousands of the rabbits were "pushed," in the wintertime drives, inside wingwalls made by two long, guiding nets between which the bunnies funneled into a catching area. Taken from the trap the ani-

mals were transported to all parts of Berks County and liberated. The recent meeting was the first of its kind since the drives were discontinued early in the 1940's. When the pines on the watershed grew large, causing the good food and cover to disappear naturally the rabbits also became scarce.

Toastmaster Oscar Becker, well-known Reading sportsman-conservationist, called upon the guest of honor for an address. After recalling events of 20 or more years ago and the changes that occurred between that time and the present, Golden told the group about the Game Commission's plans for the future. These included the enrollment of a new class of trainees at the Commission school, plans for the waterfowl area in northwest Pennsylvania and changes in the administration of the land management program on State

GUEST OF HONOR at first annual "Old Time Rabbit Drivers" Banquet in Shartlesville was M. J. Golden, Executive Director of the Game Commission. Congratulating Golden, a former game protector and field division supervisor in the southeast area, were, left to right: Oscar A. Becker of Reading, Harry Rickert, Kutztown game protector; Morris Stewart, present field division supervisor; and Lester Leinbach, a former county game protector.

Reading Eagle Photo.



Game Lands and areas leased by the Commission to safeguard future hunting, despite increasing pressures. To commemorate the occasion appropriate gifts were presented to Mr. Golden.

Demonstrating that reminiscing over outdoor experiences is one of the lasting returns enjoyed by sportsmen, the men remained long after dinner to watch motion pictures of the rabbit drives and talk over events of that era, known only to those who drove the cottontails, in fair weather or foul, on the Ontelaunee Watershed.

Many Lose Hunting Privilege

Approximately 1,000 hunting licenses were officially revoked at the April 4 meeting of the Pennsylvania Game Commission. Many of the suspensions are for a period of three years.

M. J. Golden, Commission Executive Director, said that most of the licenses were cancelled because hunters killed or tried to kill deer in close season. When a person kills a deer out of season the Game Law requires that his license be denied for three years. Another major cause of revocation was hunting without license, either resident or non-resident, Golden said.

Since January 1, 1955, the Game Commission has denied 3,636 convicted Game Law offenders the privilege of hunting or trapping in the Commonwealth. As the result of referee hearings, in hunting accidents in which carelessness or negligence was found to exist over 200 additional persons lost their hunting and trapping privileges for various periods of time.

Veteran Staff Officer Retires From Game Commission Service



E. Bruce Taylor

E. Bruce Taylor, Supervisor of the Commission's Land Titles and Records Section, Division of Land Management, retired from State service on March 28. The veteran staff officer had served since February 16, 1936. Prior to his employment by the Game Commission, Mr. Taylor had been a banker and lawyer. He is a member of the Dauphin County Bar Association.

Although his work may not have been known to most sportsmen, Bruce Taylor's duties, which he carried out to perfection, were of vital importance to the Commission. He was directly involved in every purchase of land made by the Commission in the past twenty years, his work dealing with the long and detailed abstracting of titles and requiring a thorough knowledge of the complicated legal procedures in land purchase. Greatly respected and liked by his associates in the Harrisburg office, Bruce Taylor fully merited his honorable retirement.



BILL, THE BELL SAFETY OWL has been established as the safety symbol for both the Bell Telephone Company of Pennsylvania and the Diamond State Telephone Company of Delaware. "Bill" is a great horned owl provided by the Game Commission.

Commission Completes Spring Releases of Turkeys, Pheasants and Bobwhite

The Game Commission's spring releases of game birds, with the exception of quail, have been completed. During January 700 wild turkeys, in the ratio of about 1 tom to 3 hens, were liberated in the Southeast and Southcentral Divisions on an experimental basis. During March 1,800 of the birds, 400 toms and 1,400 hens, were stocked in the Northwest, Southwest, Northcentral and Northeast Divisions.

A total of 19,600 mature ringneck pheasants, reared at State Game Farms, were distributed across the Commonwealth. The sex breakdown was 9,100 males and 10,500 females.

Before the end of April 1,000 bobwhite quail, half males and half females were stocked in southcentral

Pennsylvania, and another 500 pairs in the southwestern counties.

Mallard ducks being held at the State Wild Waterfowl Farm in Crawford County for egg production are laying, and the first eggs were placed in the incubator April 7. The first lot of purchased ducklings was expected at the Farm about the middle of April.

A total of 36,260 fifteen-week-old ringneck pheasants, 50-50 cocks and hens, have been contracted for purchase by the Commission during October.

Construction of 50 new brooder houses at the Southwest Game Farm, Armstrong County, is near completion. It is anticipated that 15,000 pheasant chicks will be reared there this spring.

Applications for day-old pheasants have been received and approved for 64,405 chicks for sportsmen's organizations and 166,845 for Farm-Game Project cooperators and farmers with lands open to public hunting—a total of 230,250. All pheasant chicks available for the 1958 program have already been allocated. Though this total is almost as high as that for 1957 some chick cancellations have been received from Farm-Game co-operators and sportsmen's organizations in southeastern counties, due to the breakdown of pheasant pens by heavy snows late last winter. Anyone interested in the day-old pheasant chick program for 1959 should contact his District Game Protector in time for consideration next year.

Bad Weather Hurt Rabbit Trapping

Early this year 54,171 rabbits were live trapped in Pennsylvania through the Game Commission's trap-and-transfer program. This total is approximately 10% less than the number box trapped in 1957.

The reduction in the take of cottontails this winter is attributed to interference caused by deep snows during the trapping period.



WINTER-KILLED DEER found this spring in one of the northern tier counties is examined by Stan Forbes, Commission field biologist in charge of a deer research project. Although starvation loss was not excessive in Pennsylvania's deer herd, several hundred known deaths from starvation were discovered in various sections of the state.

LATE WINTER DEER DEATHS

During March of this year 636 deer were reported killed on Pennsylvania highways, and farmers killed 40 for crop damage. Miscellaneous causes accounted for 747 other deer deaths during the month, including about 280 noted as due to malnutrition. The tabulation was compiled from monthly reports submitted by Game Protectors who listed only the deer losses known to them.

During the first quarter of 1958 deer died in Pennsylvania from these causes:

	<i>Crop Damage</i>	<i>Vehicles</i>	<i>Miscellaneous (WK)</i>	<i>Total</i>
January	37	489	151	677
February	24	255	283 (112)	562
March	40	636	747 (280)	1423
TOTALS	101	1380	1181	2662

Miscellaneous includes in parentheses, any animals noted as winter-killed (WK).

ANNOUNCING . . .**. . . AN OUTSTANDING SERIES OF FEATURE ARTICLES
. . . STARTING NEXT MONTH IN GAME NEWS**

Ever find yourself wondering whether or not your hunting methods and equipment are legal? What caliber and type of gun can legally be used for small game, big game, waterfowl, or predators? When and how you can train your dog? What constitutes trespass on private property?

Sure you have! We believe, in fact, that almost every hunter in Pennsylvania at one time or another has become involved in some pretty hot arguments with his companions over some point of law.

Starting next month in **GAME NEWS**, a new series of articles explaining and interpreting the Pennsylvania Game Laws will provide you with answers to most of your questions. Written by John Sullivan, Deputy Attorney General assigned to the Game Commission as legal advisor, these outstanding articles are designed to give you complete information, in easy-to-understand terms, about the sections of the law that deal directly with the hunter. Mr. Sullivan is well qualified to tackle the job of presenting the 205 pages of fine print in *The Game Law of Pennsylvania, Act of June 3, P. L. 1225, as Amended*, to our readers. He spent a number of years in reporting, newswriting, editing and publishing and is an outstanding lawyer.

Don't miss **GAME NEWS** next month, or for many months to follow. "The Pennsylvania Game Law and You" promises to be one of the greatest series of articles it has ever been our privilege to publish.

RABBIT PROTECTION—REPELLENT OR FENCE?

Sore muscles and calloused hands signify another gardening season has arrived. Now come the questions as to how to cope with pesky rabbits the housewife called "cute" last winter. The cottontails have already found flower plants and bulbs tasty. Later they will dine on Mr. MacGregor's vegetable patch, if not prevented.

Repellents designed to discourage the nibbling rabbits may be secured at seed, garden and hardware stores. Some of the most effective ones are not recommended, however. They turn rabbits away but are dangerous to humans if used on leafy vegetables. Several safe, protective agents are available but they must be sprayed or dusted on the plants following each rain to provide full-time protection.

Gardeners anticipating rabbit damage might well consider a cheap fence to protect their vegetables or flowers. A wire barrier is probably the best solution for small gardens, as well as the least work in the long run. A fence 18 inches in height, constructed of one-inch poultry netting or one-by-two-inch turkey wire, will exclude cottontails. Larger openings will allow tiny bunnies to crawl through. Rabbits will not jump over an 18-inch fence, but the wire should be tight to the ground to discourage the crawl-under maneuver. Carefully erected, taken down and stored, the wire protection will last several years.



HIGHWAY STUDY GROUP consisting of Department of Highways personnel, sportsmen and Game Commission officials confer in Scranton. Seated, from left: James C. Whalen, Dept. of Highways engineers; Steve Emanuel, president, Pa. Federation of Sportsmen's Clubs; Robert F. Riley, Scranton district engineer; Carl Stainbrook, supervisor, Northeast Division, Game Commission. Standing: Robert Alquist, U.S. Bureau of Public Roads; Holly Stanton, Wyoming County; James F. Hazen, Pike County; John Boylan, Lackawanna County; Game Protector John Lohmann, Pike County; Francis Heisler, Wyoming County; Wendell Resseque, Susquehanna County; and Frank Galonis, Lackawanna County.

A Co-Operative Step

By Frank Stout

AN example of how organized sportsmen and various state agencies can work together for the preservation of game lands and wildlife resources was acted out in Scranton during March.

In this era of superspeed highway construction that is daily pushing back the wildlife frontiers, the "Scranton experiment" may represent a turning point—a beacon, so to speak, for others in Pennsylvania and the nation to follow.

Here's what happened:

In early March, the Northeast Division of the Pennsylvania Federation of Sportsmen's Clubs, representing eight counties and about 6,800 affiliated outdoorsmen, held its regular, routine meeting in a Wilkes-Barre hotel. The meeting lost its routine nature when a few delegates casually mentioned that they had

read in newspapers of new highways to be constructed in the region and raised the question of what effect they'd have on game lands.

Someone produced a road map. By merely projecting their own ideas of where the proposed roads might go, the delegates found themselves looking at some shocking threats. State Game Land 35 in Susquehanna County appeared to be directly in the line of the Penn-Can Highway, which will run in a generally northern direction to the New York State boundary. State Game Lands 180 and 116, and a new tract still unnamed in Pike County seemed to be perilously close to a road which would run from Elmhurst to Port Jervis, N. Y., in a generally west to east direction.

Peter Murray of Beaver Meadows, president of the Northeast Division,

said, "All we have is a general idea. We know nothing definite. Let's find out what's going on." And in almost the same breath he appointed a committee, headed by John Boylan, Lackawanna County delegate, to arrange a meeting with the Pennsylvania Department of Highways at its Scranton District office.

All this occurred on a Sunday afternoon. Before that day was finished Boylan had contacted Robert F. Riley, Scranton district engineer for the highways department and arranged a meeting for a week later.

Here's what happened at that meeting:

Carl Stainbrook, the Game Commission's supervisor in the Northeast Division, lugged an armful of maps to the highways department offices in Scranton. He was backed by an impressive lineup of officers of the various county federations which make up the Northeast Division of the Pennsylvania Federation of Sportsmen's Clubs.

First there was Steve Emmanuel of Luzerne County, president of the State Federation; Francis Heisler, president of the Wyoming County Federation; Holly Stanton, Wyoming County delegate; James F. Hazen and Game Protector John Lohmann, Pike County delegates; Wendell Resseguie, Susquehanna County delegate; Frank Galonis, Lackawanna County president, and Mr. Boylan, also of Lackawanna County.

Mr. Riley, the district engineer, was flanked by his chief assistant, James C. Whalen, and Robert Alquist of the U. S. Bureau of Public Roads.

When the maps were spread out on the large desks and the sportsmen

explained their fears and hopes, the highway engineers looked on sympathetically—with a special sympathy, in fact, when Mr. Whalen spoke knowingly of the various game lands for he had hunted on them for many years.

Yes, they said, the Penn-Can Highway running toward the New York State boundary would in fact touch Game Land 35 at New Milford, but very little of the land would be lost. Biggest question in the minds of the sportsmen, however, was whether or not the new highway would "breeze" right past the game land, cutting off access. And Mr. Stainbrook wanted to know how he'd get tractors and timbering vehicles into the area.

"We can't give you a guarantee of anything," the highway engineers said, "but we do know—at last—what your problems are."

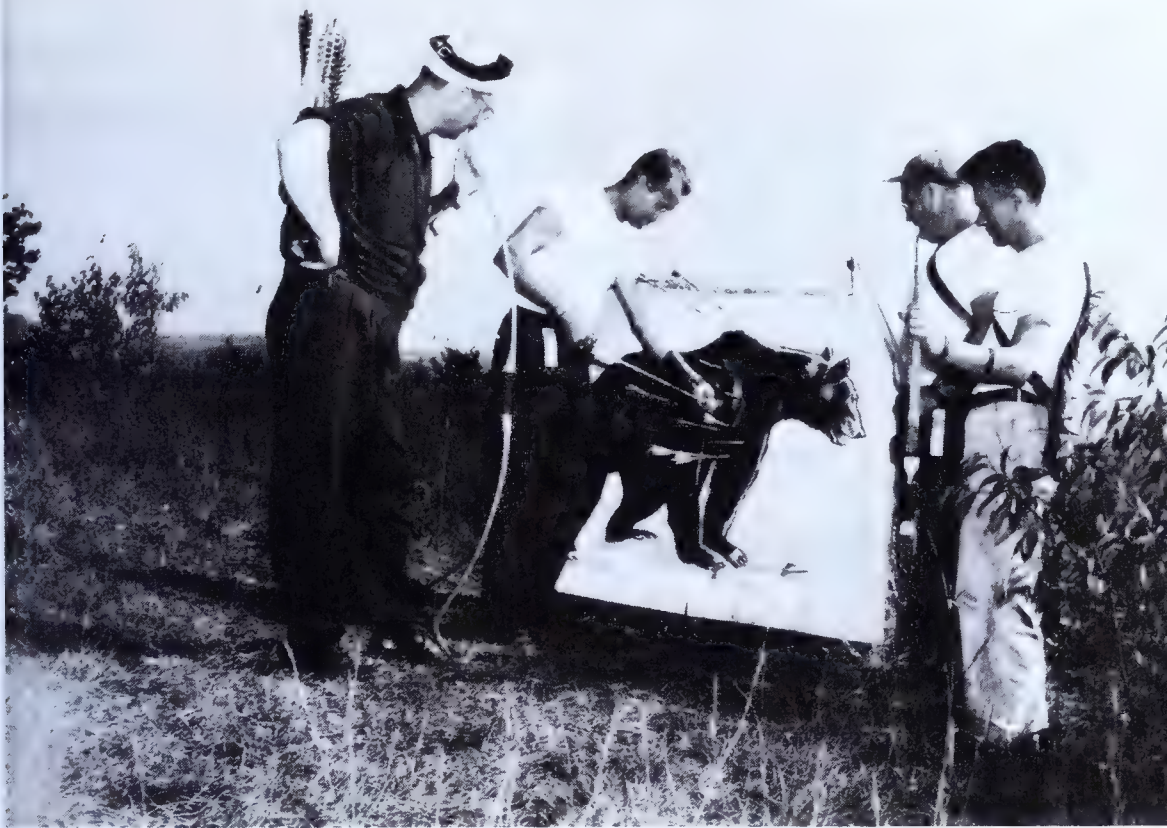
Then the engineers studied the maps closely and pointed out possible sites for access routes.

"Perhaps we can build an access from the Penn-Can Highway into the game land—or at least a connecting road," the engineers concluded.

Then, the maps of Pike County were spread on the desks. The engineers quickly pointed out that the proposed Elmhurst-Port Jervis, N. Y. road held no threat to game lands although it would come close.

Mr. Boylan, chairman of the sportsmen's committee, summed it up this way: "No one can give any guarantees these days but at least we're a lot further ahead than we were a few days ago. They know our problems and maybe they can do something about them. If we'd kept quiet, we'd have gained nothing."





FIELD TARGET SCORING is in charge of the target captain. Two members of the foursome keep the score cards while the fourth collects arrows that have missed the bale.

Conduct on the Range

By Tom Forbes

MANKIND has found it necessary to establish rules of conduct in order that we may live peaceably one with another, that each may enjoy certain privileges and that none may be oppressed. To assure compliance certain rules of conduct in human relations have been made compulsory and penalties are inflicted for their violation. To this extent our conduct is controlled by law. To a lesser extent rules and regulations are prescribed so that our group activities can be con-

ducted in a uniform manner. Official rules govern our sports but good sportsmanship does not lend itself to definition by rule or regulation. Etiquette is the voluntary acceptance and observance of long established standards of conduct in our contacts with each other. Our company is sought or avoided by the standard of conduct we establish for ourselves.

Archery tournaments provide friendly competition and good fellowship among those who have taken up the sport of archery. Familiarity with the rules that govern tournament shooting, your own willingness to put them into practice, and consideration of your fellow archers will assure you of a hearty welcome in any group.

You may or may not be a classified archer when you enter your first



tournament. Neither do you need to wait until you have acquired a high degree of marksmanship. The difficult shots are frequently missed by all archers. However it will be less embarrassing if you have attained a degree of efficiency which will permit you to place most of your arrows in the bales on the medium and short shots. When you arrive at the site of the tournament go to the registration desk and assuming that you do not have a classification card, give your full name and correct address, state that you are a novice, and you will be entered in the open class. Officials at the registration desk will make an effort to assign you to a target with archers who will provide you with competition at or nearly at your level of ability. You will enjoy shooting with them. At the conclusion of the tournament secure an attested copy of your total score for the 28 targets. Turn this information in to the Secretary of your home club and you

will have made a beginning toward classification.

Four archers are customarily assigned to each target. It is the duty of the Field Captain to appoint a target captain and two scorers are appointed for each group of shooters. In assigning targets the first name called in the group is that of the target captain and he secures the official score cards. When your name is called report immediately to your target captain. To prevent loss of time during the progress of the shoot carry extra arrows in your quiver. Do not make a prolonged search for arrows lost at any target. At the conclusion of the tournament you can return to the target and make a careful search. Frequently you will find that another archer has recovered your lost arrow and has returned it to a receptacle placed near the registration desk for that purpose.

In small tournaments all competitors start at Number 1 target. If a

REGISTRATION DESK is center of interest at all tournaments. Officials should try to assign archers of the same ability and classification to the same targets.





ARCHERY TOURNAMENTS provide friendly competition and good fellowship for thousands of Pennsylvanians and their families.

large number of shooters are entered each group is assigned a different starting target to avoid congestion. As soon as your target assignment has been received your group will proceed to their assigned target. No practice shots are permitted on the course. Archers are moving to their assigned targets and practice would be dangerous at this time. A starting signal is used to announce the start of the tournament. Generally it is a long blast on a hunting horn. Your target captain will issue duplicate score cards to two members of your group. The fourth member of the group is charged with collecting the arrows which have missed the bale.

Shooting stakes mark the shooting position at each target. To avoid unnecessary delay archers shoot in pairs on two position shots. Two arrows must be shot from each position. The shooter must stand at and behind the shooting peg for each shot. It is customary to place one foot against the back of the peg. During the course of the round you will shoot four arrows at each of

the 14-target layouts in the unit. If the course consists of a single unit, it will be necessary to shoot the unit twice to complete the 28-target field roving round. Established clubs generally have a 28 target field course consisting of two separate units. The target captain is charged with control of the shooting of his group. After the scores have been recorded for the first target shot the order of shooting is determined by the scores on the preceding target. The high scoring archer leads off on the next target, followed by the second highest scorer and in turn by the third. The low scoring archer on the preceding target shoots last.

As each archer shoots his allotted number of arrows at a target he retires behind the shooting line to permit the other archers in his group to step up to the shooting position. Absolute silence is not mandatory behind the shooting line, but consideration of your fellow archers should prevent you from doing anything which might distract the shooter.

As a safety precaution all members of the group wait for the signal of the target captain at the conclusion of the shooting to proceed to the target. Arriving at the target the status of any doubtful arrow shall be determined before any arrows are touched or withdrawn from the target. The target captain is the final judge of all disputed arrows. Five points are scored for the inner ring and three points for the outer circle. An arrow which cuts both scoring rings is scored as the ring of the higher value. The outer line of the target is outside the scoring field. An arrow must cut this line so that no color can be seen between the arrow and the scoring field in order to be recorded as a hit. It is surprising the number of decisions the field captain will have to render on arrows that fall within these categories during the course of a round.

The field captain or his designated deputy will draw all of each archer's arrows in turn from the target face, beginning with the arrows having the highest values and announcing the scoring value of each arrow as it is withdrawn from the target. Each of the scorers will enter the scoring value of each arrow on the archer's score card. When the scoring arrows have been withdrawn the number of hits will be announced and recorded. The arrows are returned to their owner along with any that have been recovered by the fourth member of the group. These latter are arrows which missed the bales. In case one or more arrows are missing it is proper to continue the search until the scoring has been completed for the entire group. When all scores have been recorded and the scorers have compared totals the group should proceed immediately to the next target if a group of archers is waiting at the shooting position. If the group which is following your group has not appeared at the shooting position, it is per-

missible to search for lost arrows until they put in an appearance when the search should be discontinued immediately. As a safety measure stand one or two bows against the face of the target if the group goes behind the target to search. This serves as a warning to the archers following if you fail to note their appearance at the shooting position.

An arrow which skids or glances into the target has no scoring value. Bounce offs or arrows passing entirely through the target are scored as three points when witnessed by your shooting companions. An arrow that passes entirely through the face of the target but remains in the butt may be pushed back and scored as a hit in the circle through which it passed. This is rough on fletching but is the only method which may be used. It is illegal to pull the arrow clear of the bales and insert the point of the arrow at the point of withdrawal and push it back through the target face. A group must consist of at least three archers on a target in order to return an official score.

At the completion of the round the scores and hits should be totaled and checked and the total for the 28 targets entered in the appropriate place on the score cards. Cards should be signed by the scorers and returned immediately to the registration officials by the target captain.

If the arrows you lost during the rounds have not been returned to the receptacle provided for the purpose and all competitors have left the course you are privileged to return to the course to make a further search for arrows lost during the course of the tournament.

Familiarity with the rules will guide your conduct and make you an acceptable shooting companion at any tournament. Be friendly with the people with whom you associate. If it were not for them you would be a stranger in the world.



Photo by Donald S. Heintzelman.

With Summer Ahead

By Horace Lytle

AT one time or another, we've all probably heard statements running something like this: "It's getting to be so a fellow can hardly afford to feed a dog all year for the limited time you get to hunt him during short open seasons."

That's an angle with which this writer has never had any sympathy whatever! A person who feels that way doesn't deserve a good dog.

Those who truly do rate-the-right-sort can always lengthen their seasons by going in for field trials. And, be it ever remembered, Pennsylvania is where Grouse Trials had their inception, and still flourish—perhaps at least a little more keenly than in any other section. Not forgetting somewhat more recent competitions since Ringnecks came into the picture. Besides which, as at Indiantown Gap not far from Harrisburg, even quail are the basis of judicial placements.

What of the Beagle? This deservedly popular little hound has become Top Boss Man in A.K.C. registrations! If you own one or more Beagles, don't figure the feed bill



based just on the rabbits they bring around for the kill. Get out with them, gun less, for enjoyment and exercise—both yours and theirs. And if you run them in Trials, and they win, you'll experience a thrill that goes deeper than any mere kill, or even the good eating of a rabbit can give you. It's all good—so go out for it ALL! If you don't, you but limit yourself—and no one else is to blame. Any good Beagle is well worth his feed bill *all year*.

There's another angle of this thing that the present writer has never been able to fathom. All too often the same fellow who moans over his hunting dog's feed bill never even mentions any kind of cost in connection with some purely pet dog that does nothing to earn his keep. This might be accounted for if the latter belongs to his wife! But that isn't always the case; and in either event I just don't "get" it.

In short, this writer believes there is no pet to compare with a sound, sensible hunting dog that is properly treated and becomes his master's companion. This develops a bond that no mere petting can breed. Make of your hunting dog not only a loyal servant afield, but your pal the year 'round—and you'll quit figuring the cost of his feed when not working. Certain pet breeds are so tiny that ladies carry them around in their muffs. These amuse me as a curiosity—but that's all. Ray Holland calls them "flea catchers." And that brings up a point of summer care.

The best thing I have ever found to kill fleas is a pine oil dip. Mixture should be 1-part pine oil to 50-parts water. If a large enough tub is used, and kept covered, you can dip a number of times in the same solution—merely replenishing spillage. Dipping dog a couple times a month will keep him absolutely free of fleas.

DOG DAYS can be just as enjoyable for canines and their owners as any other time of the year. Young beagle pups such as these can and should receive their early training right in the backyard.

Photo by L. G. Kesteloo.



CAUTION: The right pine oil for this is immediately and completely soluble in water. If what you get isn't, don't use it. Some so-called pine oils are harmful. Better get yours from your Veterinarian. Many Veterinarians these days keep this very solution on hand all summer and will dip the dog for you. There is a charge, of course, but will save you the bother.

Some time ago I was discussing fleas with one of the finest Veterinarians it has ever been my experience to meet. He told me: "I use an arsenical dip for killing fleas on dogs in summer. We mix one quart of this dip with forty gallons of water in a barrel. It can be used once or twice a week throughout the summer." If your Veterinarian can supply, or put you in touch with a source for this arsenical dip, it would be well worth using. Surely fleas are the bane of any dog's life—and that goes also for those of us who are subjected along with them.

Along a little different line, the same Veterinarian answered a question thus: "Yes, it is true that thoroughly treating the floor or ground of kennels with salt solution will kill hookworm eggs and larvae." You readers might put that down in your note books, too.

Various things can be accomplished during the summer months when field training is barred. One of these is retrieving. There's no better time to teach it, and/or tune-up performance of any that need it. The best training of any kind calls for concentra-

tion of effort. Summer seems to hold fewer distractions to take the mind of either teacher or pupil from the job at hand.

Another opportunity offered by the warmer months is swimming. Many may not have considered how many hunting dogs there are that have never learned how! And every canine, used either for fur or feathered game, should be able to swim. There can be times when it's very important. Don't tell me that every dog can—that's just not true. I admit that most of them can be rather easily taught. I recall taking two very young Irish Setter puppies to a lake, many years ago. Neither had ever seen water before. The little bitch took to it like a mink, and swam beautifully right from the start. The male puppy would have drowned had I not saved him. What's more, he never did learn to like water.

Many breeds, of course, tend to take to it more naturally than others. This is especially true of the Retrievers. Most Spaniels, too, love the water—but there can be exceptions to all rules. Many a Hound can become an expert swimmer. We have all seen Setters and Pointers that were. Yet, with dogs as with humans, there's no such word as *always*—or *never*.

This summer teach your dog to swim. And give him enough chance to become expert, so that he may even learn to like it. If you do so I promise you the day may come when you find yourself glad that you did.





OUTDOOR FUN WITH A FUTURE



Exploring Streams and Ponds

By Ted S. Pettit

SOMEHOW or other, the month of June and exploring waterways seem to go together. By June streams and ponds are warm enough so that you can wade in them, at least for a few minutes at a time and not be too uncomfortable. But more important, the water warms up enough so that plants start to grow and animal life becomes active. It is this plant life and animal life that we are interested in as outdoorsmen and conservationists.

Some of the most interesting wildlife species live in, near or on water. Our most valuable fur-bearers—mink, muskrats and beavers—live along waterways. Ducks of several species may be seen on Pennsylvania waters the year round. Many non-game birds

such as eagles, ospreys, herons, egrets, king-fishers and shore birds are usually seen in, over or very near water.

Water—streams, rivers, ponds or lakes—supports a particular type of wildlife community just as does a forest or open field. And just as plant life is the basis of all life in a forest or field, so it is in water. In turn these plants help to determine what kinds of animals will be found in water.

Several things help control the kinds of plants that will grow in any body of water. The amount of water and the stability of the water level; the depth and clearness; the temperature; the speed with which the water flows; the kind of bottom; the minerals in solution in the water and in the soil on the bottom; the condition of the land surrounding the water; whether the water is fresh, salt or brackish—all these are factors affecting plant life.

Like plants on dry land, water plants too, need light so that they can manufacture food. That's why the most luxuriant plant growth—pickerel weed, cattails, bullrushes, wild rice, arrowroot or pond lilies—are found in shallow water where the leaves can obtain pure sunlight. Some plants will grow under water where the water is clear enough for sunlight to penetrate and reach the leaves. But where silt from eroding



ABOVE—CADDIS FLY
BELOW—CADDIS LARVAE IN "HOUSES" CON-
STRUCTED OF STICKS, PEBBLES, ETC.



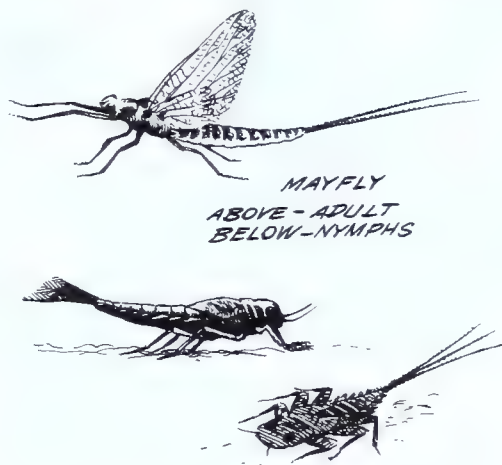
hillsides cuts off the sunlight, plants cannot grow successfully even in shallow water.

Where the water is too deep for rooted plants, small floating plants that you cannot see without a microscope take over. What these plants lack in size they make up for in numbers. There are millions and millions of them.

Living among and on these tiny plants will be equally tiny animals. Both of them together are called plankton, and without them many of the larger animals found in water would not be able to live. If it were not for plankton in water—both salt and fresh—there would not be fish for us to catch. These tiny living things spend their entire lives, generation after generation, floating in the water. They live entirely on the dissolved minerals and gases in the water and depend upon the sunlight that enters the water. When they die, they help to enrich the bottom.

This shows the importance to aquatic life of the condition of the land surrounding a pond, lake or stream. These plankton need minerals to live. The minerals get into the water through runoff of rain falling on the land watershed and draining into the ponds or streams. If this land has been "farmed out," burned over or in some other way exhausted of minerals, then the water is not so likely to contain the minerals required by plankton and other plants and animals. In the case of burned over land, rain washing over the ashes or burned wood may carry too much of the wrong kind of minerals into the water. This may kill plankton and other plants and animals.

We have been talking about tiny free moving plants, but larger plants that grow rooted to the bottom are also important. While plankton is important in the food chain of water animals, rooted plants are important both for food and shelter.



The kind of bottom in a body of water helps determine which plants will grow there. Muddy bottoms usually will support different plants than rocky, gravel and sandy bottoms. Some hard clay bottoms may not support any plants at all.

In places where the water level varies because of spring floods and summer droughts, the plants along the edge will be different from a place where the water level is the same the year round.

Movement of the water affects plant life. In lakes or ponds water moves slowly, so plants like pickerel-weed or pond lilies which have long stems may grow. In swift running streams or rivers, these plants would be broken off. But in streams and rivers you find low growing or ribbon-like plants that can withstand the fast current. Generally mosses and algae are found on the rocks in fast moving water.

Temperature too, is important to plant life in the water. Water that is very cold or covered with ice for part of the year cannot equal the plant growth of a warmer southern pond or lake. The temperature slows up plant growth and the action of the ice around the edges will affect the plants. Then too, sunlight, oxygen and carbon dioxide cannot penetrate the ice and reach the plants. They remain inactive for large parts of the year.



Let's Go Exploring

It's one thing to read about how nature works in streams or ponds, but it's a lot more fun to go exploring and see for yourself. You'll get your feet wet, and maybe more than that if you step on slippery rock. But that is all part of the fun, and a good place to start might be with what made the rock slippery. Collect some of the "stuff" on the rock and examine it closely. Perhaps a magnifying glass would help you see what it was that caused a dunking in the creek. Take home a sample, dry it out on a piece of wrapping paper and look at it again with a strong magnifying glass or microscope. Pick it apart with a needle until you have fine "strands" to look at.

While we're at it, it won't hurt to get a little wetter and find out what else might be found on the stream bottom. The easiest way to do it is to take along an easy-to-make seine.

Cheesecloth or fine mesh screening can be used. Get a piece about four feet long and two to three feet high.

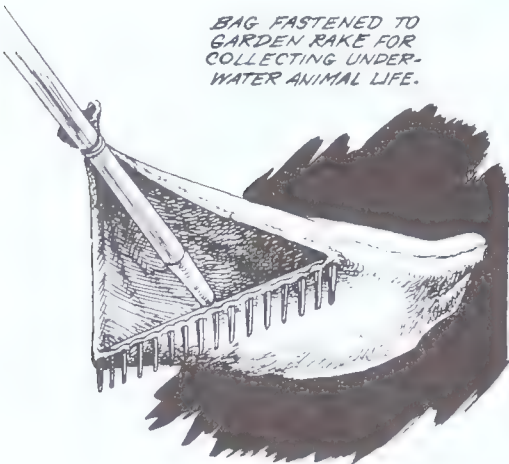
Get two one inch dowel sticks or a couple of broom handles or similar sized sticks. Tack the two foot long edges of the cheesecloth to the sticks. When you hold the top of the sticks and support the other ends on the stream bottom, you have a net which will catch anything washing down stream.

It's a good idea too, to take along a white enamel pan and a few quart jars. Put some water in the pan and the jars and place them in a shady place. You might even place the jars of water in the stream where they will not wash away, but will stay cool.

Now hold the net in the water with the sticks about three feet apart and ask a friend to lift up rocks just upstream from where you stand. Ask him to turn them over so that anything under them will wash into your net. Every minute or two examine the net and place anything you find in the pan of water. The white pan makes it easy to sort over and see better what collects in the net. You may collect silt and soil washing downstream and small sticks, pebbles and leaves. But look at them carefully. Some of those sticks may not be sticks but insects. But you will also probably find insect nymphs of different kinds that live in the water.

Insects such as damselflies, dragon flies, alderflies, dobsonflies, mayflies, stoneflies and others live part of their lives in water, living on the bottom under and on rocks. Some of them feed on that algae or "slime" which caused you to slip. Others feed on smaller insect nymphs. Some even eat fish fry. But they are fascinating creatures to collect and study, and they

BAG FASTENED TO GARDEN RAKE FOR COLLECTING UNDER-WATER ANIMAL LIFE.





are important as food for trout and bass.

A good stunt to find out what eats what is to place some stones in a gallon jar along with some slime or algae. Fill the jar with stream water and keep it in a shady place. Dump in a collection of insect nymphs. It will take time for them to become accustomed to this new environment, but they will start feeding and it is possible to watch them. Dragonfly and damselfly nymphs easily capture other nymphs and eat them, as well as small fish and other aquatic animal life.

Interesting too, is to watch how these nymphs move about. Some can only crawl. Others can swim by ejecting a jet of water and others move about freely with a jerky motion. When you have them in the white pan, you can see this easily if you touch them to make them move about.

These insects are interesting to collect and observe. But they are also important to wildlife of several species. These nymphs are part of a food chain that starts in the algae or slime and ends with an osprey, kingfisher, mink or even you. Here's how it works and if you watch carefully, you can see each step for yourself.

As it has been pointed out, the algae or plant life is at the bottom of the food chain. Some insects and

other aquatic life can eat only plant life. But other insect nymphs eat those that eat plant life. They cannot eat plant life themselves and live. They must exist on other animal life. Some small fish too may eat plant life and insects, or one or the other. But game fish such as trout or small mouth bass eat only animal life—insects, smaller fish or even crayfish or other aquatic animals. Kingfishers, ospreys, eagles, mergansers, mink, and man eat the fish that eat the fish or insects that eat the insects that live on plantlife. It's very much like "this is the house that Jack built."

If something happens to break a link in the chain, animals higher up



DRAGONFLY
ABOVE - ADULT
BELOW - NYMPH



suffer. Silt from soil erosion, pollution from towns or factories, runoff from burned over areas, are some of the things that are responsible for breaking the chain—making the water in a stream unsuitable for certain plants or small animal life. The chain is broken, so go the trout or bass and the animals that live on them.

Let's Explore a Pond

Exploring a pond or lake bottom is much like exploring a rocky stream. The method of collecting insects and other aquatic life though is a little different.

Insect nymphs will live among the rocks along the edge of a pond or lake, but they also live in vegetation that grows in a pond and in the mud or silt on the bottom.

A common kitchen strainer about six or seven inches in diameter can be purchased in any dime store, and makes an effective collecting tool for use in the mud or silt on a pond edge.

Take along a small white enamel pan two or three inches deep and

some quart jars. Wade out carefully in the pond or reach down from the edge and scoop up a strainer full of mud. Carefully raise and lower the strainer at the surface of the water so that the mud washes out through the strainer and not over the edges. If you have picked the right spot, you will find nymphs in the strainer when the mud washed out.

Many of these same families of insects live in ponds as in streams, but they may be different species. But the nymphs generally look much like their stream living relatives.

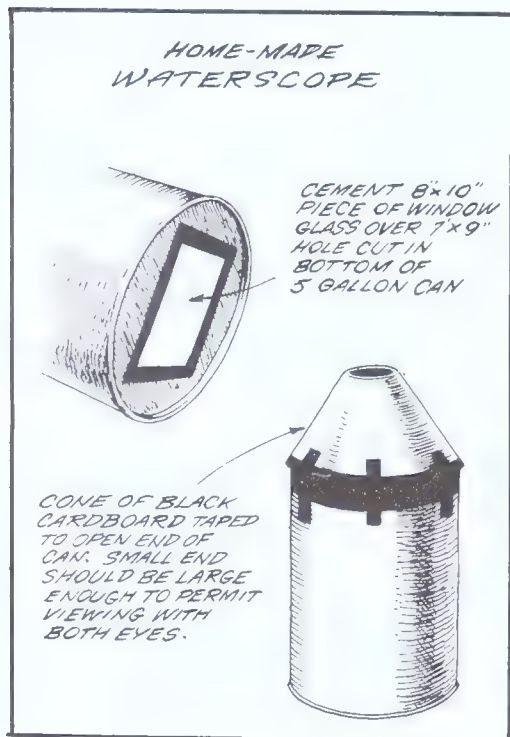
Another good way to collect animal life on the bottom of a pond is to use a garden rake. First though, fasten a burlap or other cloth sack to the back of the rake so that as you drag the rake along the bottom, what you stir up is collected in the bag.

Many of the insects that live as nymphs in the pond lay their eggs on the stems of plants that grow in the water, when they become adults. Perhaps you can find some of the eggs or see the insects as they light on an emergent plant, crawl down the stem and lay their eggs. Other insects fly across the water dropping down to lay their eggs just below the surface. Still others such as damselflies, will crawl down a plant stem to the bottom to lay eggs.

Other insects, larvae of which may be found in muddy edges of ponds are deerflies, horseflies and droneflies. The larvae of these flies feed on organic matter in the mud or soil along the pond edge.

Other animals you may find on pond or lake bottoms are mollusks—snails, clams or mussels. Some of these animals are eaten in large numbers by muskrats, and some of the snails are eaten by fish.

Snails generally are found in water about six feet deep where there is an abundance of plant life to provide them food and cover. They serve as



scavengers in ponds, helping to clean up dead plant materials.

Mussels and clams live on the bottom where they move about. They usually require mud or silt in which they feed on microscopic life, which they strain from the water.

Pond snails may be collected by hand from water plants or collected with a small strainer. They will live well in an aquarium that has enough plant life to supply them with food and oxygen.

Several kinds of ducks feed on these animals. Gadwalls, black ducks, shovelers, ringnecked ducks and bluebills may eat snails and other mollusks as part of their diet. This does not make the ducks as desirable a food for man as when they live on plant life, but the duck doesn't know that and eats what it can get easily.

Make a "Waterscope"

With a homemade or "store bought" waterscope, it is possible to really explore the underwater life of a pond or lake and see nature in action in a way that is otherwise next to impossible. Looking through the film at the surface of the water distorts what you see underwater. Reflections on the water or any ripples stirred up by a breeze make it difficult or impossible to see beneath the surface. A "waterscope" is a device that enables you to see through the film.

The simplest device to make consists of a half gallon can with both ends cut out and a clear plastic food bag. Slip the bag over one end of the can and pull it tight so that

the surface is smooth and free of wrinkles. Fasten to the can with two or three heavy rubber bands.

To use it, merely push the closed end down in the water an inch or two and look through the open end.

A more elaborate but permanent device may be made by cutting a 7 x 9 hole in one end of a five gallon can. Then cement a piece of window glass 8 x 10 inches over the hole, being sure that water will not leak in around the edges.

Next, get a piece of black cardboard and make a cone out of it so the big end fits over the open end of the can and small end of the cone is large enough, so you can look in with both eyes. Fasten the cone on the can with tape.

Use the waterscope from a boat or pier. Row out to a mud bed and then drift. Look down through the waterscope into the weeds. You can see some fascinating sights in these underwater jungles.

Exploring streams and ponds and collecting aquatic plants and insects is fun in itself. You can do it day in and day out all summer and have more fun each time. But more important, is finding out how nature works in the water. Fun in the future—fishing, hunting and trapping as well as the future of some of our most beautiful and interesting birds, depends upon finding out all we can about water plants and animals, and how they live. What you see and what you learn may some day contribute knowledge that is not known now.



What Do You Know About Trees?

By Carsten Ahrens

How intimately do you know trees? Have you studied their leaves, chewed their twigs, smelled their flowers, eaten their fruits? Have you enjoyed their shade, the multi-greens of their leaves in spring and their veritable Roman holiday of hues in autumn?

Most of the trees in the quiz below are commonly found in our state. See how many answers you can get right.

- Name the conifer in Pennsylvania with the longest cone.
A. Red Pine B. Larch C. White Pine D. Hemlock E. Spruce
- Which pine has five needles in a cluster.
A. Pitch Pine B. Red Pine C. Scrub Pine D. White Pine E. Jack Pine
- Which conifer loses its needles in the fall.
A. Jack Pine B. Larch C. Hemlock D. Spruce E. Cedar
- Which pine can be recognized by two long needles in a cluster?
A. Red Pine B. Scotch Pine C. White Pine D. Pitch Pine E. Loblolly.
- Which conifer has scales instead of needles for leaves?
A. Hemlock B. Fir C. Spruce D. Larch E. Juniper.
- Which conifer has cones that sit upright rather than depend from limb?
A. Balsam Fir B. Hemlock C. Fir D. Pitch Pine E. White Pine.
- Which tree has leaves that may take three distinct shapes?
A. Sassafras B. Water Oak C. Hop Hornbeam D. Beech E. Laurel Oak.
- Which tree has a fan-shaped leaf?
A. Cotton wood B. Ginkgo C. Crimson Oak D. Chestnut E. Paper Birch.
- Which tree has a tooth-edge leaf?
A. Cucumber Tree B. Catalpa C. Sassafras D. Osage Orange E. Cherry.
- Which tree has a smooth-edged leaf?
A. Trembling Aspen B. Choke Cherry C. Mulberry D. Shingle Oak.
- Which tree has no lobes on its leaves?
A. Red Maple B. White Oak C. Slippery Elm D. Tulip Tree.
- Which tree does not have a simple leaf.
A. Box Elder B. Pin Oak C. Sugar Maple D. Sycamore E. Tulip Tree.
- Which tree does not have a compound leaf?
A. Walnut B. Ash C. Sumac D. White Poplar E. Mountain Ash.
- Which tree has twigs with the taste of mint?
A. Sweet Gum B. Sour Gum C. Dog Wood D. Horse Chestnut E. Yellow Birch.
- Which tree has twigs with a bitter taste?
A. Pig Nut B. Sassafras C. Basswood D. Wild Cherry E. Red Bud.
- Which tree can be told by the odor of crushed bark, root, or twig.
A. Honey Locust B. Sweet Gum C. Sugar Maple D. Basswood E. Sassafras.
- Which Maple has milky sap?
A. Red Maple B. Norway Maple C. Silver Maple D. Sugar Maple.
- Which tree does not have white flowers?
A. Basswood B. Dogwood C. Mountain Ash D. Horse Chestnut E. Judas Tree.
- Which tree has flowers with five petals?
A. Red Maple B. Crab Apple C. Cucumber Tree D. Tulip Tree E. Dogwood.
- Which tree does not have its seeds in pods?
A. Catalpa B. Black Locust C. Honey Locust D. Elm E. Red Bud.
- Which tree does not have its seeds in a thorny ball?
A. Buckeye B. Wild Crab C. Chestnut D. Sycamore E. Sweet Gum.
- Which tree does not have wings on its seeds?
A. Basswood B. Maple C. Ash D. Tree of Heaven E. Hickory.
- Which tree has purple berries?
A. Mountain Ash B. Holly C. Hackberry D. Ginkgo E. Hawthorne.
- Which of these trees does not have thorns?
A. Wild Crab B. Honey Locust C. Box Elder D. Hawthorne E. Osage Orange.
- Which oak can be told by the bright yellow of its innerbark?
A. Black Oak B. Scarlet Oak C. White Oak D. Pin Oak E. Red Oak.

ANSWERS TO TREE QUIZ

13-D	25-A
12-A	24-C
11-C	23-C
10-D	22-E
9-E	21-B
8-B	20-D
7-A	19-B
6-A	18-E
5-E	17-B
4-A	16-E
3-B	15-D
2-D	14-E
1-C	

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HAY FIELD — ELEVATE SICKLE BAR 6 TO 8 INCHES SO IT PASSES OVER NESTING BIRDS AND YOUNG BIRDS AND RABBITS

PENNSYLVANIA

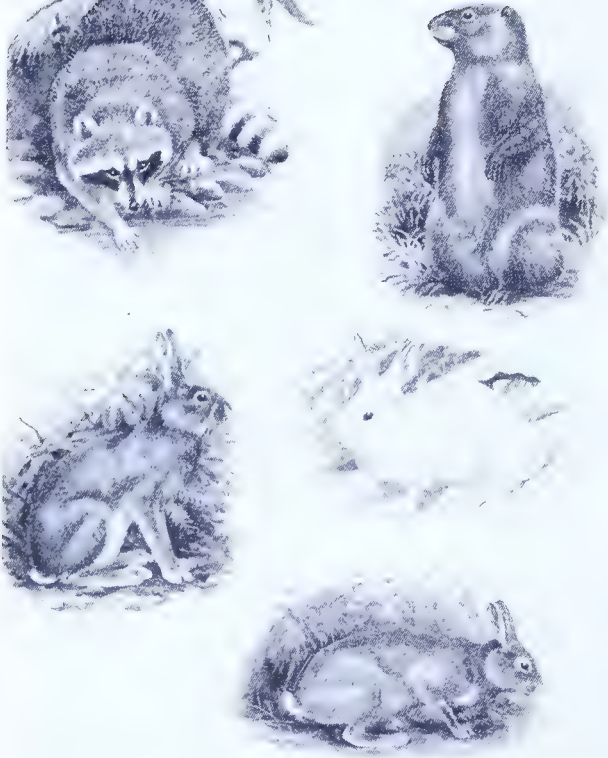
GAME NEWS

JULY, 1958

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THE STORY BEHIND THE COVER

LEGALLY speaking, the mammalian quartet captured in full color on this month's front cover are classified as "game animals" in Pennsylvania. In addition the red, gray, black and fox squirrels (which will be featured on next month's cover) are classified the same way by Article I of the Pennsylvania Game Law, as are the elk, deer, and bear.

Those who have hunted the woodchuck (upper right), snowshoe hare (middle) or cottontail rabbit (lower right) certainly would not question their legal classification. All three of these popular rodents deserve the recognition given them by law and they likewise warrant the protection it infers. In summer, of course, there are some people who have their doubts about a closed season on rabbits and groundhogs. These two gnawing experts seem to take particular delight in raiding farm and garden. But with the use of winter live-trapping and transfer plus the application of new repellents now coming on the market, these complaints can be greatly alleviated.

Surely the cottontail provides more sport for more people than any other moving target. This small game animal is really the big game animal for the small boy. He probably is the first trophy of the hunt that every new hunter brings home. Abundant over almost all of Pennsylvania, the cottontail leads men and dogs a merry chase each autumn, despite the fact that every predator—human, feathered or furred—wages constant war against him. The woodchuck, likewise, has gained high stature as a sporting target. He is the only animal, in fact, that has his name on the calendar even though his weather predictions each February are seldom serious. The snowshoe hare is renowned for his change from summer (left) to winter (right) coat. He also has gained an avid following here because of his speed before the hounds and because he does not "hole up" as commonly as his country cousin.

Last but not least, the raccoon (upper left) joins the small game fraternity. In many ways, however, he is different. The "little brother to the bear" is a carnivore, rather than a rodent; he has a hide that is used extensively in the fur trade; and he is much more nocturnal. Legally he's game but by popular classification, some folks call him a predator while others think of him as a furbearer. But for those who follow the voice of Bugle Ann or any other good coon hound, there is no finer quarry than the raccoon.

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Commonwealth of Pennsylvania

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PENNSYLVANIA GAME NEWS

Will Johns Editor

Zelda Ross Circulation

JULY, 1958

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Earl Poole

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Editorial . . .

The Game Law and You

WITHOUT law there can be no guarantee of "life, liberty and pursuit of happiness."

Written or unwritten, the rules and regulations for acceptable human conduct enable a highly complex society to function with fairness and equal opportunity for all. Law in a democracy can, should and usually does reflect the desires of the people in regulating their lives, in setting standards for their way of life.

Without game laws there would be little, if any, game. There certainly would not be a fair and equal harvest or use of wild birds and animals. Not all the people would receive maximum benefit in this and future years. History, in fact, clearly demonstrates that most basic game laws were enacted to save from extinction wildlife species being plundered by a relatively few people to the detriment of all.

And yet no law, by itself, can right a wrong. It must have just and impartial enforcement; it must be recognized as necessary by a majority of the people. Without public support, no law nor law enforcement program can succeed. Any law which is not clearly understood or does not express the will of the people probably won't be upheld.

The Pennsylvania Game Law, technically known as the Act of June 3, 1937, Public Law 1225, as Amended, is a comparatively new legal document, even though it traces its origins far back into history. Like most laws, it is constantly being amended to meet rapidly changing conditions among both human civilization and wildlife populations.

But the basic intent and purpose of this law has never changed. It was enacted to provide a means by which the citizens and sportsmen of this Commonwealth could properly manage, protect and perpetuate their valuable wildlife resources. It protects your rights as well as the rights of others; it likewise guarantees protection to all wild birds and animals. The Game Law is the basic guide to good sportsmanship and sound game management.

This is your law. It is your duty to uphold and obey the law, to modify it only as the need for such change arises, and to assist your legally appointed representatives in enforcing all of the law's various provisions. In this effort you will continue to maintain those "self-evident truths" first declared in Philadelphia one hundred and eighty-two years ago. And you will help insure that "unalienable right" of the pursuit of happiness.

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Whose Game Is It Anyway?

By John Sullivan

Deputy Attorney General

FIRST OF A SERIES

HAVE you trailed any anatidae to their lairs lately? Or, perhaps, given your dog a workout pointing some rallidae or limicolae? Maybe you just satisfied yourself with one of the gallinae, so long as it had better than three-inch antlers.

If you did any of those things, go to the head of the class, because it's a good trick to follow the scent of geese, brant, river and sea ducks, who comprise the anatidae family. More

than that, it's a real smart dog that can point the rallidae, commonly known as rails, coots, mudhens and gallinules, or the limicolae clan of shore birds, plover, surf birds, snipe, woodcock, sandpipers, yellowlegs, tattlers and curlew. And three inch antlers on wild turkeys, grouse, pheasants, partridges and quail, who are gallinae all—that would really be something.

These high-fliers, says the General

ABOUT THE AUTHOR

JOHN SULLIVAN is a Deputy Attorney General assigned as legal advisor to the Pennsylvania Game Commission, Fish Commission, Department of Forests and Waters, Agriculture, Historical and Museum Commission, the State Tax Equalization Board and the Aeronautics Commission. He is also a member of the legal committee of the International Association of Fish, Game and Conservation Commissioners and of the Interstate Oil Compact Commission.

Law is actually Mr. Sullivan's second career. He spent a number of years in reporting, news-writing, editing and publishing, including stints on the late *Philadelphia Record* and *Philadelphia Evening Ledger*. He has also done magazine work, public relations and advertising. He went from the University of Pennsylvania Law School into the Navy during World War II, seeing action in the Pacific as air combat intelligence officer with a dive bomber squadron aboard the U.S.S. Essex. At the present time he is a Commander in the Naval Reserve program at Willow Grove Naval Air Station. Mr. Sullivan is a member of the Philadelphia, Delaware County, and American Bar Associations.

In introducing this series of articles on the Pennsylvania Game Law, Mr. Sullivan writes: "Although I have been interested since boyhood in hunting, fishing, camping and outdoor sports, my special interest in conservation dates from my friendship with the late Supreme Court Justice Grover C. Ladner, who was a Deputy Attorney General when I was a secretary in the Governor's Office during the thirties." By training, interest and ability, John Sullivan is fully qualified to write these feature articles. They are designed to better acquaint you and all sportsmen of the Keystone State with the game laws enacted to protect and preserve the sport which they cherish.



NED SMITH

Assembly of Pennsylvania, are game birds, as are birds of the order columbae (doves to you) and the grackles or blackbirds. On the animal side, the Assembly has similarly separated the game from non-game by officially identifying as game the wapiti, which you may prefer to call elk, the deer, bear, wild rabbit and hare, the red, gray, black and fox squirrel, the raccoon, and the woodchuck or groundhog. And it has decreed, Mother Nature to the contrary, that "fur-bearing animals" shall consist exclusively of the mink, muskrat, opossum, otter, skunk or polecat, and beaver.

All these are protected, as are all wild birds except the blue jay, English sparrow, European starling, kingfisher, goshawk, sharpshinned hawk, Cooper's hawk, great horned owl, snowy owl and crow. The Game Commission may add any bird to the unprotected list. In 1957 protection was given to migratory hawks during September and October of each year in the eastern Pennsylvania flyways.

Having defined what it means by wild animals and wild birds, namely not domestic, the General Assembly then answers that old, old question that has probably provided more crackerbarrel and hot stove discussion than any other aspect of game management—"Whose game is it?"

Says the Pennsylvania General Assembly:

"The ownership, jurisdiction over,

and control of wild animals and wild birds, as herein defined, are hereby declared to be in the Commonwealth, in its sovereign capacity, to be controlled, regulated, and disposed of in accordance with the provisions of this act." (Game Code, Act of June 3, 1937, P.L. 1225, Article I, Section 101.)

So ends, probably for our lifetimes at least, a rhubarb that goes back to the cave man. State ownership of wild game is now recognized generally as a well settled principle of law everywhere in America.

It was not always so. The question agitated the early Romans, and there is much learned discussion of it in the Institutes of Justinian. Solon, in ancient Athens, asserted the States control over game by forbidding hunting altogether, "seeing that the Athenians gave themselves up to the chase, to the neglect of the mechanical arts." In England such great legal authorities as Blackstone and Lord Coke gave Game Laws their solemn attention. One line of thinking, that the game belonged to the sovereign, was countered with the view that the State's police power, and not any theory of kingly ownership, was the basis of the State's right. In the United States the definitive word on the question was said long ago by Mr. Justice White, who in 1896 decided in *Geer v. Connecticut* (161 U. S. 519, 522-528) that each State



owns the wild game within it. The decision is still the law, and the Pennsylvania General Assembly's assertion of State ownership of wild animals and wild birds has the full backing of the United States Supreme Court.

The Pennsylvania Supreme Court has confirmed this in a celebrated game case, *Commonwealth v. Patsone*, 231 Pa. 46, 48, 49:

"As stated by the learned trial judge: 'The right to hunt game is but a privilege given by the Legislature, and is not an inherent right in the residents of the State. Wild animals and game of all sorts have from time immemorial been the property of the sovereign and in Pennsylvania the property of the State. Its power to regulate and prohibit the hunting and killing of game has always been conceded.'

In his discussion of the *Geer* case, Justice White founded the concept of State ownership on the English common law, which remained the law in the United States after the colonies broke away from England.

"The practice of the government of England from the earliest time to the present has put into execution the authority to control and regulate the taking of game," he wrote.

"Undoubtedly this attribute of government to control the taking of animals *ferae naturae*, which was thus recognized and enforced by the common law of England, was vested in

the colonial governments, where not denied by their charters, or in conflict with grants of the royal prerogative. It is also certain that the power which the colonies thus possessed passed to the States with the separation from the mother country, and remains in them at the present day, in so far as its exercise may not be incompatible with, or restrained by, the rights conveyed to the Federal Government by the Constitution."

Both the *Geer* and the *Papsone* case were cited by the Attorney General of Pennsylvania in a 1929 ruling upholding the Game Commission's authority. The question arose when the Borough of Norristown, wishing to raise and sell wild animals as part of the operation of its Zoo, was required to obtain a game propagation permit even though it claimed exemption as an agency of the Commonwealth.

Although doves are among the State's official game birds it is of interest that pigeons infesting public places in Philadelphia (notably City Hall) were decreed by the Pennsylvania Supreme Court in 1946 not to be game birds within the meaning of the Game Law, and therefore eligible for extermination as a public health nuisance. (*Hayward v. Samuel*, 254 Pa. 266).

This is an interesting contrast to *Commonwealth v. Borden*, 61 Pa. 272, in which Justice Agnew upheld the

Act of April 9, 1760, forbidding the shooting of any pigeon, dove, partridge or other fowl in open streets of the City of Philadelphia "upon the forfeiture of forty shillings for every such offense."

As the administrators of the State's property right in its wild game the Legislature has provided for an unpaid eight-member Game Commission selected from specified geographical districts throughout the State. The Commission is required to meet in Harrisburg twice a year, in January and July, but usually meets at least quarterly and sometimes more often. Its staff of paid employees is headed by an Executive Director, who is Chief Game Protector. All employees are prohibited by law from engaging in political activity. The Game Commission's field force also includes unpaid Deputy Game Protectors, who are entitled to fees only, except that they may be paid when specially employed for specific duties.

It is the Commission's duty "to protect, propagate, manage, and preserve the game, fur-bearing animals, and protected birds of the State, and to enforce, by proper action and proceedings, the laws of this Commonwealth relating thereto."

To carry out that assignment the Commissioners, the executive director, and the game protectors, are given wide powers:

- (a) to enforce game laws, and to go on any property (except buildings) for that purpose;
- (b) to execute warrants;
- (c) to serve subpoenas;
- (d) to carry firearms;
- (e) to purchase and resell game, etc., to secure evidence;
- (f) to arrest without warrant suspects found in the act of violation or

in immediate pursuit thereafter;

(g) to call on any citizen for help in making arrests;

(h) to stop, inspect, and search without warrant at any time any vehicle or conveyance, and its occupants or contents.

(i) to do the same with boats, and with clothing, game bags or game receptacles;

(j) likewise with hunting party rosters, hunting camps, tents, cabins or detached automobile trailers or trucks, including houses or outbuildings used in connection with hunting camps;

(k) to secure and execute search warrants to enter buildings and break open containers;

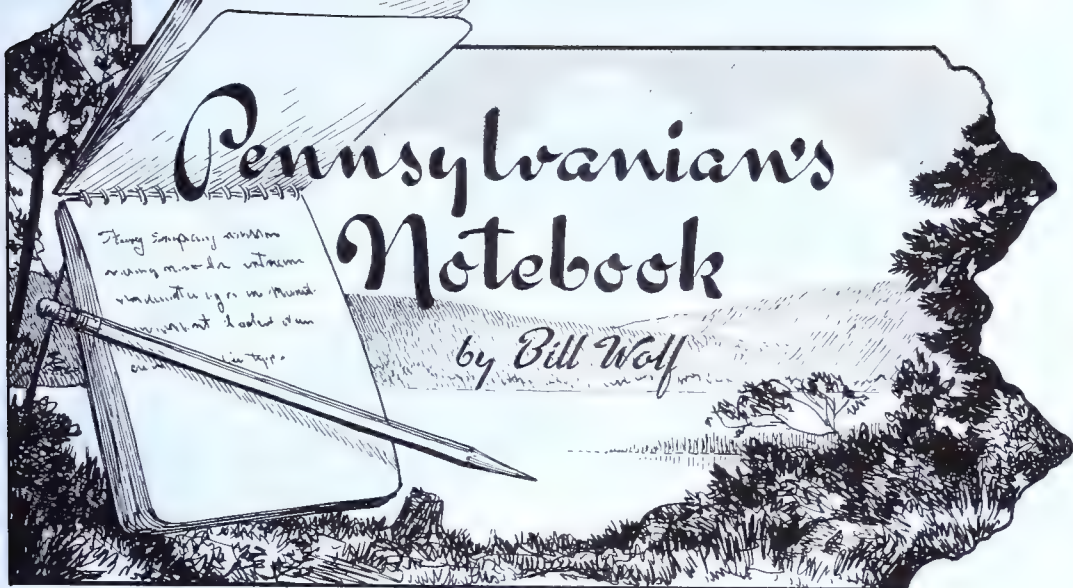
(l) to seize birds or animals in the course of an arrest or investigation;

(m) to seize guns, autos, dogs and other equipment used in violation of the Game Law; and, finally:

(n) to administer any oaths required by the law.

These extensive police powers reflect the long struggle to impress upon the hunting public that the taking of wild game is not a free-for-all proposition, but a privilege which the State grants upon condition that its rules and regulations are observed. In recent years, through a combination of education and enforcement, this concept has been making greater headway. There are fewer "outlaws" in the woods and fields, and there is less inclination on the part of the law-abiding hunter to condone lawbreaking. As a result Pennsylvania's game protectors have been able to give an increasingly greater part of their time to game management. But the Big Stick of enforcement is still there, keeping in line the die-hards who still feel that anything *ferae naturae* is theirs for the shooting.





Pennsylvanian's Notebook

by Bill Wolf

PENNSYLVANIANS often travel from home base, on business or pleasure, and can't help making comparisons, odious or otherwise. This is a comparison between our State and the Republic of Colombia in South America, particularly of the wildlife found in the two wide-apart places.

Why Colombia? What connection is there between wildlife in the Keystone State and there?

Well, I happened to spend considerable time in Colombia last year, and couldn't help but notice a few things, and Colombia has a lesson for Pennsylvania in the wildlife field if I can make it clear without being preachy.

Colombia is the republic immediately below Panama, and the only one in South America that fronts on both the Atlantic Ocean (by way of the Caribbean Sea) and the Pacific. Within its borders, it has nearly every kind of terrain and climate imaginable, from jungles and sea level

swamps to mountains forever capped with snow. Three great ranges of the Andean Mountains run north and south, and no more jumbled or terrifying mountains can be found than the Andes. It looks as though someone up there didn't like the region, and recklessly threw great gobs of mountains all over it.

Between the mountain ranges are the valleys, humid and more than warm, the *tierra caliente* of the first Spanish explorers, and still the "hot land" of the present inhabitants. As one ascends from the valleys, the land changes from jungle and swamps to ever cooler regions with far different vegetation until it becomes cold, and then frigid on the highest peaks of the mountains where nothing lives. As you can see, this should be ideal for all kinds of wildlife, ranging from the animals and birds of the tropics, to those common in temperature climates, to those in our sub-Arctic zone.

At least, that is what you would expect of so wild a land. The food is there, the cover is there, the right climate is easily available—but wildlife in the hunting sense scarcely exists. With a few exceptions, to be noted later, it is a barren land for the hunter. I traveled many hundreds of miles by automobile, and sometimes the road took us to 10,000 feet in elevation where we clung to the side of a mountain which con-

BILL WOLF is nationally known for his writing on outdoor and conservation subjects. His articles regularly appear in *Saturday Evening Post*, *Sports Afield*, and many other periodicals. This magazine is privileged to publish some of his work, including this latest article on his recent South American trip.



tinued to rise far above us. In all those miles, I saw no dead game on the road which, although narrow and dangerous, was paved and carried a fair amount of traffic. I rode by muleback well beyond the end of roads, and saw no signs of game except for a scurry in the underbush caused by some small animal, and a den hole that probably belonged to one of the little foxes they have in Colombia. There were some dead dogs on the paved roads.

I don't like to see dead game on our Pennsylvania highways any more than the next fellow, but, by seeing

it, I at least know we have game. And I know that a trip away from the highways such as the one I made by muleback would reveal an abundance of game in the Keystone State.

What marks the difference between Pennsylvania and Colombia? The lesson Pennsylvania can learn from this South American republic lies in the answer to that question. It is a lesson that has been instilled into us before, but which should be repeated year after year, and generation to generation.

This is the answer: If there are any fish and game laws in Colombia, I failed to find them. If there were such laws, there is no one to enforce them. Conservation of wildlife and natural resources is almost unknown. In Pennsylvania, we have fish and game laws, we enforce them, and a number of conservation agencies are at work to assure the future of the state.

Colombia has been under white rule for more than four centuries. Before the arrival of the Spaniards, the native Indians lived either in small, scattered tribes, or in rather permanent large towns along the major rivers and the seacoast, living principally on fish and the fruits and vegetables produced so abundantly there. They were not much of a threat to wildlife. Even the mountain tribes confined their small amount of hunting principally to the llama, and

to the llama-like vicuña of the high Andes. The *vicuña* was valued for its silken, luxurious wool, and if these earlier native Colombians came under the domination of the Peruvian Incas, as they probably did near the borders of what are now Ecuador and Peru, they obeyed a rigid game rule. Once a year, the Incas conducted a *vicuña* hunt in different sections where this animal—about as elusive as a mountain sheep—was driven by thousands of lesser Indians from the mountains to central valleys where they were killed. Only a certain number was slaughtered, however, to provide wool for the Inca nobles. They were always careful to leave a large brood stock. The inferior Indians who did the hunting were given some of the meat and the hides.

The Spaniards changed all that. They took what they wanted from the wilds when they wanted it. More, they had to have labor to build the cities of the interior, to till the farms and raise cattle so they impressed natives into their service. That is, they practically made slaves of the Indians and moved them from their original homes. Negroes couldn't

stand the colder climate of the high plateaus like the great plain on which the capital metropolis of Bogota stands, nearly 9000 feet above sea level, so African slaves remained on the coast.

There are still some pure natives in Colombia, but most of the population is a mixture in varying degrees of white, Indian and Negro blood. Today they are no longer slaves, but they might just as well be so far as income goes. Beyond the cities, they live in small villages or individual thatched huts scattered through the mountains. Although they raise chickens, some goats and an occasional cow, meat is scarce despite the fact that Colombia has more beef than it knows what to do with and the price is so low that even the natives could afford it. There is no refrigeration, though, and no way to get the beef from the great cattle areas to the remote inhabitants except alive, and this is seldom done. In what might be called country stores, a red flag is hoisted on the occasional days when fresh meat is available. This has nothing to do with game, but a white flag is



put up when fresh milk is for sale.

Naturally, these people will kill anything that resembles game, and have been doing it for four centuries without controls of any sort. If some game animal or bird pops its head up, it is in the stewpot and on the fire before it knows what happened. I cannot say the land has been shot out—the natives don't have money for firearms and ammunition—but it has been cleaned almost to the last bone. If anyone set out on an expedition, expecting to "live off the land," all he would have to eat would be natives, papayas, parrots and vultures. Every edible kind of game has been snared, trapped or otherwise caught and eaten, and eventually the fish in the streams will give out from overnetting and spearing. Along the coast, dynamite doesn't help a bit in conserving the salt water species.

There is no reason why Pennsylvanians should feel superior. We were in much the same boat seventy-five years ago because there were few restrictions on hunting, and little enforcement of the occasional law that was imposed. We had shot out our buffalo in the western part of the state, the elk had just about disappeared from the more rugged mountains, and the white-tailed deer apparently was on its way to oblivion. Wild turkeys were gone, a few quail and a retreating number of grouse were about the only game birds left, market hunters were fast eliminating waterfowl, the wild pigeon had joined the dodo, and even the squirrels and rabbits were declining. A popular country dish was flicker or robin potpie. Only remote mountain streams or those managed by private clubs held native brook trout.

The only way to round up enough game for a real slaughter was to hold a "ring drive" in which a circle of hunters chased game toward an ever-narrowing center where everything was shot. The same sort of wanton

slaughter, although not necessarily in the form of a ring drive, marked the progress of white men westward from the time of their earliest landings on the east coast. The Pilgrims might have feasted the first year or so on wild turkey and venison, but not for long, because they killed at will like all the other settlers, and soon there were no more turkeys or deer left in New England. By the last quarter of the last century, Pennsylvania was well-drained of most of its game, and nothing serious was done about it until the early 1900's when the Game Commission was formed, and a small, hard core of enforcement men cracked down on those broke the new game laws.

Even as late as 1924, the blight of the "good old days" of reckless slaughter was still felt. I believe I have mentioned before in this occasional series that I lived at that time in a hilly section of Pennsylvania. There were no deer, no pheasants, no trout. We hunted rabbits, squirrels, a few quail and groundhogs. Today, the same place has an abundance of deer, a good number of pheasants, and three kinds of trout in the streams, plus the rabbits, squirrels and groundhogs.

It boils down to this: Do hunters want perfect freedom to kill what they want whenever they wish, as they could do in Colombia, where there is no game due to just such freedom of action—or do they want the restrictions Pennsylvania imposes upon them in the form of open and closed seasons, bag limits and control of the way game may be killed? Every year there is an immense amount of grumbling about one or another game law in the Keystone State, but the hunters might remember that there wouldn't be any argument if there was no game to argue about, and that laws imposed a long time ago have guaranteed us that game. There were disputes over most of those earlier laws. Some were good, and some were not workable.

Others were practical, but abandoned because of heavy opposition to them from sportsmen. Over the years, however, a working set of laws was put into operation that saved our wildlife from oblivion until Pennsylvania became famous as a state where conservation worked.

This is hard to believe, but I can see in a week's time more wild game immediately around my home on the edge of Philadelphia than I did in the whole time I was in Colombia! No, I do not live in a suburban section. The miles of Philadelphia homes stretch east of me, and there are more miles of houses built close together in every other direction. The "wildest" places nearby are a Friends Burial Grounds across the street, about thirteen acres of cemetery, and a narrow stretch of Philadelphia's park system several blocks away. My home and those of several neighbors have relatively large lawns, but they run down to a solid block of row houses about 50 yards in the rear. It isn't exactly open country.

The other day, a hen pheasant ran across the lawn in front of the house, 30 feet from the heavily-travelled street. A few days later, I watched from an upstairs window as a hen and cock pheasant came down to a landing across the way in the cemetery. There are the inevitable gray squirrels, an occasional rabbit, a number of crows in the cemetery trees, and an opossum was found dead this past winter in my neighbor's backyard. Several years ago, a deer leaped through the plate glass of a service station at a very busy intersection about five blocks from where I live. They aren't hunted, of course, but they face more than ordinary hazards from small boys and innumerable pet dogs and cats.

Some exceptions to Colombia's lack of game were mentioned earlier. There are a number of jaguars, smaller ocelots and still smaller members of the cat family, which prob-



ably survived because they are are not considered table delicacies even by the strong-stomached natives of the country. The same is true of the puma, or mountain lion, although it is no longer found over much of its former range. Deer, rabbits, bear and squirrels are vanishing from the "temperate" zone (that is, up the Andean slopes where forests and a cooler climate occur), while the harmless and stupid manatee, or sea cow, has been well killed off in the Atrato and other Colombian rivers that flow north. I do not see how any alligators or crocodiles, which could provide interesting hunting, survive at all because they are slaughtered indiscriminately without protection, to wind up in curio shops as ladies' handbags, men's wallets or "stuffed."

There is one vast section of Colombia, however, where the hunting is good to excellent for a very simple reason: There are few human beings there, native or white, to hunt. Here are woods and plains, or *llanos* and *planos*, which sweep down from the

eastern (and relatively uninhabited) slopes of the Andes of southern Colombia and northern Ecuador toward the jungle lowlands of the headwaters of the Amazon river. There are ranches on the fringes of this huge land, so reminiscent of our own western plains that descend from the Rocky Mountains as they were more than a century ago; but there are also great herds of roaming and unmolested wild cattle. The feline flesh eaters follow them, and are hunted by occasional parties. There are deer, too, wild pigs, rabbits, and a curious game animal quite popular with the few sportsmen of Colombia, the tapir. This South American anteater looks either like a large hog with an especially long snout, or a miniature elephant with a particularly small trunk, I can't decide which. Much sought after is the Brazilian duck, a native of South America, and, in the wooded highlands, the crested curassow, a bird which sometimes reaches twelve pounds in weight.

There is heavy shooting for migratory North American ducks on the Caribbean coast in the north, with no limit about the only law; but this isn't quite as bad as it sounds. Few can afford to hunt where a box of shells costs a laborer several days pay, and buying a good gun is not only almost hopeless, but

likely to be viewed with suspicion by the military. The dynamiting of fish on this coast has already been mentioned.

I believe that almost any kind of North American game could survive and prosper in Colombia with its varied terrain and climate, but I'm certain it wouldn't in a land where there are no game laws and nothing resembling a game protector. To me, it's a pretty sad example of what Pennsylvania might have been.

Although not intended that way, this next item in the notebook sort of expands upon the foregoing one. My daughter and her husband moved to a farm near Collegeville last fall. Most of the land in that vicinity is posted against hunting, but this does not mean it isn't heavily hunted. Frequently, the friends of a landowner feel that he has reserved the right to hunt on the land solely for their benefit, and the place is overrun, which may be some form of divine retribution.

Speaking of posting, this farm was signed off by the owner (my son-in-law and daughter rent it) just before last hunting season. My daughter and husband moved in November 1. Neither hunts, and I doubt whether they would refuse permission to hunt to anyone who asked for it so long as they didn't shoot near the farm buildings or damage any property, which are not unreasonable restrictions. No one asked permission, but quite a few strangers hunted the land although it was posted. No one was ordered off, or threatened with prosecution for trespass, but now they are wondering whether their forbearance was the wisest thing. Hunting parties parked their cars on the drives around the buildings, one even parking its automobile in front of the barn door. Someone shot a spike buck in small game season right behind the barn. No one ever paused to thank them, or even to say hello. It makes one wonder about a certain breed of hunter.





Photo Courtesy Carnegie Museum

The Mastodon-Forest Elephant

By John E. Guilday

"Dese bones gwan rise agin" is the paleontologist's battle cry. But all too often the resurrected skeletons of fossil animals stand on marble pedestals, sunlight playing through their ribs, casting dramatic shadows in splendid but incomprehensible glory. For the scientist and the scholar this is adequate, more, it is priceless. The actual specimens upon which his profession is based, they stand waiting to be studied. These long-vanished creatures are the bed-rock (sometimes quite literally bed-rock) foundations of the study of evolution, the paleontological pins that hold the fabric together.

But there is another side. These dark, mud-stained bones were once white. Integral parts of a system of bone and muscle, they were once *alive*.

Such chalky bones had bulk, bulk that pressed upon the earth to leave fresh tracks in a vanished mud. We are standing at the shoreline of a lake, up to our ankles in water, hanging onto a dead spruce trunk, trying to keep our balance on a quak-

ing mat of bog plants. How did we get here, on this wind-swept lake-shore? It doesn't matter. We are here. A furrowed V in the wind-chopped water takes shape and turns into a dripping beaver as it ambles out of the water onto a sandy spit.

I cannot describe the lake for you. I never saw it. It was choked to death by a tightening ring of bog plants, many thousands of years ago. (This swamp, a lake once more since 1933, men now call Pymatuning.) The old lake is gone. But the sound of the loon that rode its surface is still with us, and the waves, and the wind. We don't have to imagine the molten flash of the setting sun, nor the fluting song of a veery, nor the feeling of vast loneliness and inadequacy that such a wilderness scene engenders.

Teetering on our hummock we stare somewhat blankly at a line of dishpan-shaped tracks veering off along the shoreline. Nothing in our past experience has taught us to recognize these. We strike out, lurching and leaping from a green rotten log here to a bubbling moss clump

there, following those oozing tracks that go stumping through the swampland. A white-tail buck snorts at us and stands there ogling. A duck whistles in at treetop level, circles the lake once, and settles down at the far end. The sun is now below the spruce trees and shadows strike through the forest. Each tree becomes a silhouette. We have just about decided that this wild lake shore is not for us, especially with night falling fast, when ahead of us one shadow detaches itself from the rest and resolves itself into what looks like an elephant trying to hide in a hearth rug, the testing trunk held stiffly in our direction, a twiggy spray of hemlock branches dangling from its mouth. Now standing ankle deep in a sucking swamp, amid clouds of hungry mosquitoes, is no place to confront a curious mastodon. The creature has us spotted, and this huge, broad-backed, flat-headed elephant throws back its trunk and sets the echoes of the lake flying with an ominous trumpeting. Imagine a beast ten feet at the shoulder, fifteen feet in length and built more like a beer barrel than a modern elephant. This was the mastodon. A sapling cracks as the animal shifts to face us squarely. The mosquitoes rise in encrusting clouds. The mastodon has made up his mind, curls a hairy trunk between gleaming eight-foot tusks, and charges. Now if you can get us out of this one, do it fast. The way I look at it, we're cooked.

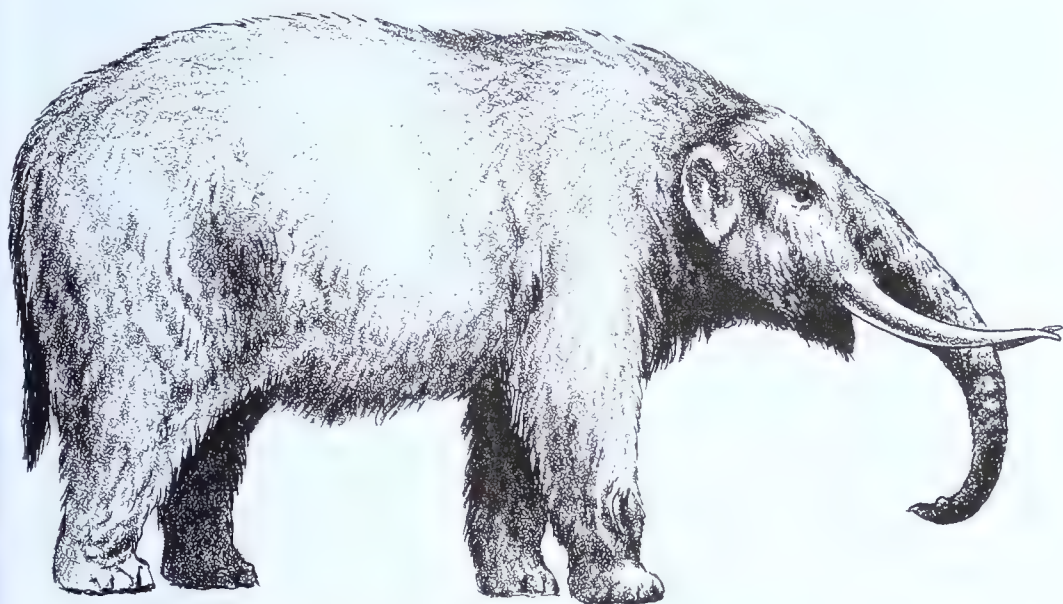
Elephants were part of the American scene for many millions of years, arriving, most probably, from Asia via the Bering Strait-Siberia to Alaska route. Most of the many different kinds of American elephants died out completely before the end of the Pleistocene Ice Age. A few species persisted until only yesterday, some eight or nine thousand years ago.

The mastodon was not a true ele-

phant, in the modern sense of the word. If we saw one crashing around the bushes we would unhesitatingly dub it as such, but it was off on an evolutionary tack of its own. Early in proboscidean history the elephant stock split into several basic groups which pursued somewhat different ways of life. Two of these families, the mammoths and the mastodons survived till a comparatively late date in North America. The mammoths seem to have been elephants of the grasslands, the steppes, and the treeless tundra. Their millstone molars were well adapted for the heavy wear they received from a diet of grass and other gritty fare. The mammoths, and there were many species living throughout the world, were true elephants, closely related to the living Indian elephant. Mastodons took the other fork in the road and became, or possibly remained, browsing animals—the elephants of the northern forests. The breadloaf molars of the mastodon remained simple and primitive in pattern, suited for a diet of tree leaves and bark, but not built to withstand the excessive wear they would get on a diet of prairie grasses. A parallel situation is found in the short-crowned molars of a deer (a browser) and the high-crowned molars of a buffalo or a cow (grazers).

Mastodon bones and teeth are well known fossils in Pennsylvania. Their remains have been found in hundreds of localities throughout the East. Most often they turn up in the muck of reclaimed bogs, bogs that are the relics of lakes formed by the melting of the last glacial ice of the Pleistocene, some 10,000 years ago.

Time and the mastodon have passed on. Too bad! This was one tough old Pennsylvanian that would have given the bow and arrow boys a run for their money. Now, if you'll excuse me, I have to figure a way out of that danged swamp.

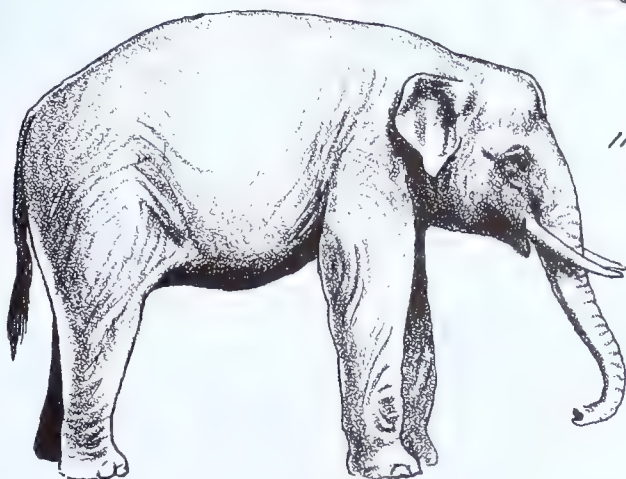
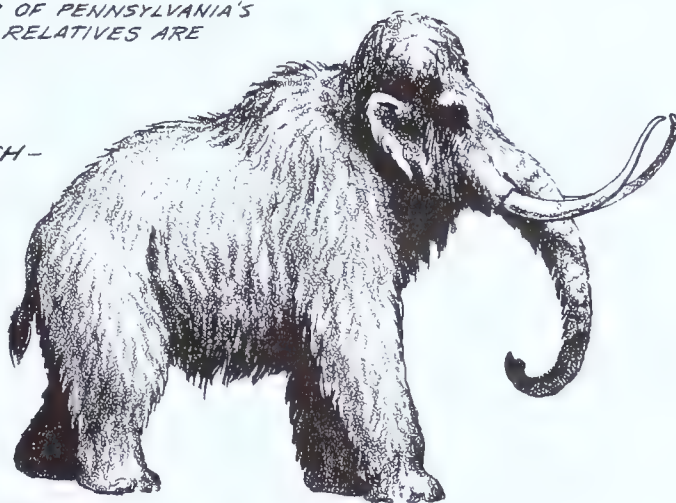


MASTODON-

AN EXTINCT MEMBER OF PENNSYLVANIA'S FAUNA. TWO OF HIS RELATIVES ARE SHOWN BELOW.

WOOLLY MAMMOTH-

AN EXTINCT MAMMAL FORMERLY INHABITING THE COLDER REGIONS



INDIAN ELEPHANT-

TODAY'S POPULAR "CIRCUS" ELEPHANT

NED SMITH





PGC Photo by Cady

DUCKS-EYE VIEW of the Decoy Pipe type live-trap on Lake Ontelaunee, Berks County. The birds are lured thru funnel-like openings and are eventually herded into a catching compartment.

Ten Thousand Ducks In His Bag

By Robert E. Latimer

Waterfowl Management Agent, Pennsylvania Game Commission

IN cooperation with the U. S. Fish and Wildlife Service, the Pennsylvania Game Commission has been engaged for the past several years in live-trapping and banding wild waterfowl within the state. The federal agency had signified that the species on which they needed much more information—of the kind obtainable through banding—were the black duck and the Canada goose. They desired that the banding be done on either the breeding grounds or the wintering areas.

Not too many Canada geese winter in Pennsylvania and it was decided to concentrate the Commission's banding efforts on the black duck. With this in mind the logical place to do this work appeared to be the

Maiden Creek Dam in Berks County where a considerable number of ducks winter each year, a fairly large number of black ducks among them.

After some trapping had been done in this area with portable traps, it was apparent that if enough birds were to be caught to make the program worthwhile and economical, it would be wise to install a permanent trap of the modified Decoy Pipe type such as we had used with good success at Pymatuning Refuge. A site thought to be one of the most desirable on the Maiden Creek area was therefore selected and the trap was constructed during the summer of 1953. District Game Protector Harry H. Rickert, of Kutztown, is assigned to fifteen townships in northern Berks



CATCHING BOX in foreground has held thousands of ducks during the past few years. Each bird has been carefully handled during the banding operation and then released in order to obtain more information on the life history and travels of waterfowl.

County. His district includes Lake Ontelaunee, the huge reservoir impounded by the Maiden Creek Dam. From the first he entered into this waterfowl project enthusiastically and worked hard with several others in building the trap. The first trapping was done in January, 1954 and right from the beginning the trap caught birds in satisfying numbers whenever weather conditions were favorable.

Due to the trap's location and because of his interest in this work, it was decided to turn the operation of the trap over to Rickert and after some preliminary trapping, this was done. Each winter since then, during the time weather conditions were favorable, he has conducted the trapping and banding operations there with good success. W. R. Ketner, Deputy Game Protector from Hamburg has ably assisted Harry Rickert in this work.

From the time this trap was first opened in January, 1954 to the end

of the period it was operated in 1958—March 31st, a total of 10,124 waterfowl have been banded. The "catch" included:

- 8276 Black ducks
- 1603 Mallards
- 99 Green-winged teal
- 62 Pintails
- 43 Baldpates
- 17 Mallard-Black Hybrids
- 11 Coots
- 9 Ring-necked ducks
- 3 Redheads
- 1 Canvasback

This is believed to be the largest number of black ducks ever banded anywhere at one location. The live-trapping, banding and releasing was done more economically than any other operation of its kind, so far as known. It is sincerely hoped and believed that the information gained from the band recoveries on these birds will materially help in the better

DUCK NUMBER 10,000 is banded by Game Protector Harry Rickert, left, as Deputy W. R. Ketner holds the bird. The light aluminum band in no way handicaps the bird. It contains a number and a request to notify the proper authorities if recovered after release.





TRAPPED WATERFOWL swim calmly inside the entrance to the trap, awaiting the banding operation. Each day during the trapping season the birds are herded into the catching box, banded and then released.

management of the black duck—one of the most important if not the most important birds to the eastern waterfowl hunter.

Keeping a trap of this type in good repair, trapping and banding the birds, keeping the banding records—all require a lot of work. Trapping conditions are at their best on days

when the weather is worst—rainy or snowy with cold winds—and this means those doing the work are often cold and wet themselves. This is not minded too much by one who really likes this type of work, however, and Harry Rickert really does. My hearty thanks and congratulations to him on a good job well done.





Pennsylvania's Thundering Herds

By J. Herbert Walker

Thundering herds of buffaloes roamed the wilds of a greater part of Pennsylvania in Indian and early pioneer days—which, no doubt, will be news to the nearly million gunners in the Keystone State today.

And the buffaloes were the first trail builders in the commonwealth.

While these great beasts have passed into oblivion, just as did the native elk, moose, wolf and panther, the several Buffalo Creeks, Buffalo Valley, Buffalo Mountain and Buffalo Path have recorded forever the name of this animal whose hide helped to clothe and keep comfortable the early pioneers and whose flesh added to the meagre larder of the settlers who built their homes on that early frontier.

It may be noted here that the tongues of the animals were considered great delicacies and that the flesh of young calves—born in late spring or early summer—also held high place even though the flesh of all animals was consumed by the frontiersmen and settlers.

"Before roads were built, narrow trails served as routes for commerce on foot or horseback. Often these

followed closely the ancient paths traversed for centuries by the buffalo and the Indian. Many so-called Indian trails, now important highways, merely followed paths beaten by the buffaloes in their annual migrations," writes S. W. Fletcher, in his monumental work, "Pennsylvania Agriculture and Country Life, 1640-1840," published in 1950 by the State Historical and Museum Commission.

"These great overland routes from the Atlantic seaboard were undoubtedly first opened by the buffalo" writes Archer Butler Halbert, in "Historic Highways of America."

"One of these routes," he writes, "was from the Potomac river through southwestern Pennsylvania to the headwaters of the Ohio. (National Pike, or U. S. 40, follows this old path to a great extent.) There were lesser thoroughfares which, though lately known as Indian trails, were undoubtedly paths of the buffalo. One of these was the famous Kittanning Path from the headwaters of the Juniata river to the Allegheny—the route of the Pennsylvania railroad across the Alleghenies. (The Kittanning Path passed over the



mountains in the vicinity of what is now known as the famous Horse-shoe Curve, just west of Altoona.) Another was the old trail through Bedford and Carlisle, later to be known as the Forbes Road.

In "Historical Highways of America," are these words:

"The buffalo, because of his sagacity, was able to lay out trails that avoided swamps and precipices and held to the lowest possible levels thus making the courses easiest to follow."

No wonder the Indian and later the white man followed those easy grades. No wonder highways and railroads followed in turn.

Thomas Ashe, writing from Erie in 1806, says:

"Herds of buffaloes roamed part of Pennsylvania in pioneer days, especially from Lake Erie southward through the valley of the Susquehanna river and its tributaries. In the autumn of 1773 a herd of over 12,000 passed along the West Branch of the Susquehanna on annual migration, down to the Cumberland and Shenandoah Valleys. Hunters posted themselves by deeply worn buffalo paths during the migration season and killed them by the hundreds."

Ashe, in his well-known book "Travels in America," also wrote:

"In the vicinity of the spot where the town of Clarion now stands, one of the settlers built a salt spring which was visited by buffaloes in such large numbers that he supposed there could not have been less than two thousand there at a time."

In "The Planting of Civilization in Western Pennsylvania," by Solon J. Buck and Elizabeth Hawthorn Buck, published by the University of Pittsburgh Press in 1939, the authors write:

"The animals of the forest were both helpful and harmful to the early settler. From them he obtained food, skins and furs, but some of them were dangerous or destructive. Among the animals that were both useful for food and for skins the more important were the deer, the elk, the bear and the bison. This last animal, or rather a species of it known as the wood buffalo, was once common in western and northern Pennsylvania. Aside from the testimony of early travelers in the region, there is evidence of the presence of the buffalo in the names of several Buffalo Creeks, Lac Le Boeuf, and a 'Buffalo Swamp' delineated on the early maps in the vicinity of Clarion.

"The animals differed from the buffalo of the plains in that they were larger, (some of the bulls are said to have weighed a ton,) were more nearly black in color with shorter hair and no hump, and were shaped more like domestic cattle with a relatively horizontal backbone and large hind quarters.

"The wood buffalo is now extinct, for the settlers, in the midst of a region that appeared to be limitlessly stocked with game, adopted the tactics that later so nearly resulted in the extinction of the plains buffalo—those of slaughtering many of the animals and using only the tongues, hearts and hides. One account of the slaughter of the 'last herd' places the event in the winter of 1799-1800, but it is evident that





for some time before that the animals were to be found only in the unsettled region in the north-central part of the state."

S. N. Rhoads, in his wonderful book, "Mammals of Pennsylvania and New Jersey," wrote that the old settler at Clarion declared that for the first several seasons the buffaloes visited his salt spring with utmost regularity. They traveled in single file always following each other at equal distances, forming droves on their arrival of about 300 each. These embraced probably a score of family groups which perhaps had some "clan" relationship.

"The first and second years, so acquainted were these brutes with this man's house, and with his nature, that in a few hours they rubbed the house completely down, taking delight in turning the logs of wood off with their horns, while he had some difficulty to escape from being trampled under their feet or crushed to death in his own ruins," says Rhoads.

At the time he estimated there could not have been less than ten thousand in the neighborhood of the spring. They sought for no manner of food but only bathed and drank

three or four times a day and rolled in the earth, or reposed with their flanks distended in the adjacent shades and departed in single file, according to the exact order of their arrival. They all rolled successively in the same hole and each time carried away a coat of mud to preserve the moisture of the skin and which, when hardened and baked by the sun, would resist the stings of millions of insects that would otherwise have persecuted these animals.

In the first and second years, according to Rhoads, this old man and his companions, killed from six to seven hundred of the animals merely for the sake of their skins which were sold for small sums of money.

Col. Henry W. Shoemaker, author and naturalist, says there was a salt spring in the valley of Stony Creek, not far from Harrisburg, which was visited by vast herds of buffaloes. To reach it they swam the Susquehanna river at its confluence with the Juniata and headed for the salt lick which may have been on what are now State Game Lands beyond Ellendale Forge.

By 1800 only a few buffaloes survived in Pennsylvania. One of the last was killed near what is now



WESTERN PLAINS BISON

Capitol Hill, Harrisburg, according to the "Annals of Harrisburg," by George H. Morgan, published in 1858. The killing took place in 1792.

Dr. George P. Donehoo, in his book, "History of Indian Place Names in Pennsylvania," second edition, published in 1928, says of the various Buffalo Creeks in Pennsylvania:

"According to Heckewelder, Sisiliehanna is a Delaware Indian word meaning 'buffalo stream'."

Heckewelder was a Protestant missionary among the Pennsylvania Indians and kept minute records of his religious pilgrimages, observing clearly the life, customs, costumes, language and habits of the red men.

Rev. John Ettwein, another missionary to the Indians, writes in his "Notes of Travel, 1772"—"Reached Clearfield, where the buffaloes formerly cleared large tracts of undergrowth, so as to give the appearance of cleared fields; hence the Indians called the creek 'Clearfield'."

Waterford, in Erie county, was originally called Le Boeuf, which, of course, followed the naming of the French fort at the same place.

Dr. Donehoo also has this to say about French Creek: "The French expedition under Celoron de Bien-

ville, in his journal, writes. 'I continued my route as far as the village at the River aux Boeufs, which is only nine or ten cabins.'" On the map of his expedition drawn by Father Bonnecamp, a member of the party, the creek is noted as "R. aux Boeufs." (River of Buffaloes.) This name is given to the stream on all French documents pertinent to the expedition and the period following.

Dr. William T. Hornaday, noted naturalist, devotes more space in his monograph on the extermination of the American bison than any other writer. In a map which he prepared showing the range of the buffaloes in North America, he drew a line approximately just west of the Susquehanna river showing where the herds, and then the stragglers, lingered until the last years of the Eighteenth century. This would bring the range a trifle west of Harrisburg, Liverpool, Sunbury, Lewisburg, Lock Haven, Emporium and Bradford.

Most of the diarists and recorders of early days failed to give a good description of the buffaloes that inhabited Pennsylvania—how they looked, their size, coloring, habits. Col. Shoemaker, writing in 1915, said:

"With the meager records the hunt for traces of the bison in the Keystone State might seem discouraging were it not for the wealth of oral traditions, embracing every topic connected with life in colonial days, which runs like an underground stream through the hearts and minds of old pioneers * * * but from the descendants of some of the early pioneers some record of the Pennsylvania bison has been obtained.

"However, much of what has been thus obtained will only interest the scientist and student, for it matters little to most persons to learn that the Pennsylvania bison was different in appearance from most of his western congeners, that he belonged to the type known as the wood bison. At the same time it does seem worth

while to present a description of our bison from the lips of the grandson or a noted hunter of the species.

"Doubtless west of the Alleghenies the individuals shaded into the true bison of the plains, but those which ranged between the east and west slopes of the Alleghenies, migrating between the Great Lakes and the valleys of southern Pennsylvania, Maryland and Virginia to Georgia, represented the type of the bison of the Keystone State."

Jacob Quiggle (or Quigley) of Clinton county, was the grandson of Phillip Quiggle, who not only was an officer in the Revolutionary war but a noted hunter and pioneer. Col. Shoemaker says Jacob Quiggle, on his 90th birthday, gave a description of the Pennsylvania buffalo, as related to him by his grandfather. He reported his grandfather as saying the Pennsylvania buffalo was a tremendous animal, exceeding for the most part the buffaloes of the western plains. In color the Pennsylvania animal was very dark, many of the old bulls being coal black, with grizzly white hairs around the nose and eyes. The hair was very short with a tendency to crispness or curliness, especially at the joints. The hump, so conspicuous on the western buffalo or bison, was notable by its absence. The legs were long, and fore and back legs evenly placed, the heavy front and meager hindquarters of the western bison were not present—in other words the Pennsylvania buffalo was a beautifully proportioned beast, an agile runner and climber and carried no superfluous flesh.

Certainly the animal was well adapted to the rugged Pennsylvania terrain.

According to Mr. Quiggle, the bulls often weighed a ton, mature cows about half that much. The hair on the neck and shoulders was no longer than on other parts of the body, except with the mature bulls, who car-

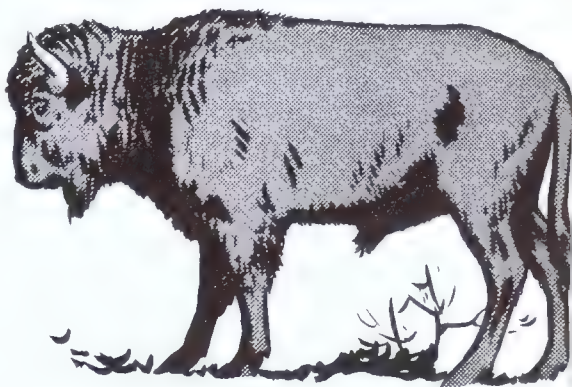
ried a sort of mane or crest which reached its maximum length where the hump grows on the prairie buffalo.

Both males and females wore beards but they were not heavy and consisted of tufts of straight, stiff, black hair. The horns which in mature specimens were very long, grew upwards like the horns of Ayrshire cattle. Mr. Quigley said the Pennsylvania buffaloes preferred dense forests, although on warm days they could be found sunning themselves in open spaces.

The onrush of civilization preyed upon the herds of buffaloes. Thousands upon thousands of them were killed. The great thundering herds that moved over the state, were broken up into small groups of were driven westward. The small groups were relentlessly pursued by the pioneer settlers until finally the last buffalo native to Pennsylvania had disappeared.

The last small herd in Pennsylvania was slaughtered in the winter of 1799-1800, in the White mountains, not far from Weikert, Union county, and Troxelville, Snyder county. It is a tale that would be unthinkable today.

Martin Bergstresser, Snyder county pioneer, was one of those who helped



EASTERN WOODS BISON

to wipe out the last herd. The list of names of the men who took part in that slaughter still have familiar ring in Snyder county, where many of the descendants still live.

The winter of 1799-1800 had been particularly severe and food on the mountains could not be had by the buffaloes. It was covered deep with snow. The last herd, crazed by hunger, penetrated the valley. While passing the farm of Samuel McClellan four buffalo cows were slain. The herd fell afoul of the barnyard and haystack of the Bergstresser farm. The famished beasts, scenting the hay, broke through the stump fences and the animals were soon tearing away at the hay. Bergstresser, aided by his daughter, killed four more of the animals. With the smell of blood in their noses, and crazed by harassing dogs, the buffaloes became terrified. Soon the more than 300 of them were snorting and plunging about. An old bull lunged through the log cabin door. Inside were the pioneer's wife and three small children. The plunging animals, following the leadership of the big bull, crowded into the cabin where they pressed the life out of the pioneer's wife and children, their bodies being deeply embedded in the earthen floor.

News of the tragedy spread throughout the valley. Settlers were invited to join in a hunt for the herd, which had departed for the mountains, and to avenge the deaths of the Bergstresser family members. More than 50 men gathered and started for the hills. They spent two days before locating the herd.

When the hunters got close to the animals they found them numb from cold and hunger and "crusted" so deeply in snow drifts they could not get away. The slaughter began. Some of the settlers used rifles to kill the animals; others crept up on the great beasts and slew them by slashing their throats with heavy hunting knives.

The site where the last herd of

native Pennsylvania buffaloes was slain is still known locally as the Buffalo Field.

The date for the killing of this last herd was fixed by Flavel Bergstresser, a direct descendant of Martin Bergstresser as December 31, 1799. He came to that conclusion because, he said, he always heard the "old folks" say it was "after Christmas and before New Year's."

And who killed the last buffalo in Pennsylvania?

Records show that the last individual animal was killed by Col. John Kelly, February 19, 1801. The spot where the last buffalo fell is known today as Buffalo Cross Roads, in Union county.

Buffalo paths ran through the valley of Henry Run, to the east end of Sugar Valley, thence across the "red hills," through the west end of White Deer Valley, across Buffalo Mountain into Buffalo Valley, across that valley, over Jack's Mountain and the White Mountains into Middle Creek Valley where the animals wintered in large numbers.

In Sugar Valley, the Buffalo Path was worn deep by the tread of these heavy beasts. Many of the trees along the trails had bark rubbed off by the animals in their migrations, according to early records.

Along Buffalo Run, in Union county, the path—as well as buffalo wallows—was still plainly visible as late as 30 years ago and was traversed by this writer. At one spot a gigantic hemlock tree, now gone, showed unmistakable signs of rubbing. The poth is still a familiar landmark for hunters, fishermen and hikers.

Dr. Beck, who is quoted in Prof. J. A. Allen's "History of the American Bison," gives a different version of the last of the Pennsylvania buffaloes. He says a buffalo cow, which escaped Col. Kelly and some of his companions in 1800, ultimately took refuge in the "tight end" of Union county, near the Centre county

line, and defied its pursuers. Thus the fate of the really last buffalo in Pennsylvania may never be known.

The huge skull of the buffalo killed by Col. Kelly in 1801 was nailed to a pine tree and was a familiar sight for many years. About 1820 the skull was blown from the tree in a gale and was picked up by some Kleckner children—relatives of the Kellys—and for years reposed in the garret of the Kleckner home at Kelly Cross Roads, named in honor of the intrepid Col. Kelly. When the mansion was remodeled about 30 years ago the skull, containing the horns, was thrown on a rubbish heap and burned to ashes in a spring house-cleaning fire.

The writer of this article just missed getting the skull of that last buffalo. He was only two weeks too late.

But though the native buffaloes were gone, Pennsylvania for nearly

a half a century—1845 to 1885—was the leading tanning center for western buffalo hides which were shipped in by the carloads. Many of these hides were tanned at Wilcox, Elk county, and in several other upstate communities. During this period it is estimated that more than a million buffalo hides were tanned. Many of these hides were sold in Pennsylvania; others were shipped elsewhere. So many were they the price dropped perceptibly. A few such hides could be purchased as late as a quarter of a century ago at farm and mountain personal property sales in the hills of north-central Pennsylvania.

The tread of thundering herds long since has passed away in Pennsylvania, of course, but it is important to know that these great beasts have left their name in a number of places though the buffaloes have vanished into the shadows.

WILD TURKEYS ARE WARY OF TRAPS

Experience has taught many hunters how difficult it is to bag a wild turkey. Trapping the bird is no easy task either, Game Commission wildlife biologists have learned.

Despite last winter's deep snows, which should have forced turkeys to the baited live traps for food, the catching success was poor during the agency's trap and transfer program.

This study by the Commission's research personnel was undertaken in an attempt to improve wild turkey populations in southcentral Pennsylvania by introducing some wild birds trapped in the northcentral counties. But only 28 of the birds, 17 hens and 11 toms, were captured and transferred in the operation. These turkeys were trapped at seven locations in five northern counties, hence there was little reduction in the flocks from which they were taken. The birds that were caught were liberated on the Game Commission's wild turkey area in Perry County.

No Fishing From Breasts of Dams

The Game Commission at a recent meeting passed the following resolution: "It shall be unlawful for any person to fish from the breasts of dams owned or controlled by the Pennsylvania Game Commission."

The action was taken "to protect the dams against vandalism, erosion and other deterioration that would increase the cost of maintenance and repair," the resolution states.

In January of this year the Pennsylvania Fish Commission adopted the same resolution affecting breasts of dams owned or controlled by that agency.



An Introduction To Mr. Needles

By Wilbert Nathan Savage

IN Clinton county, Pennsylvania, a veteran trapper once voiced this pithy observation: "There are a great many things about a porcupine that commands one's respect—his quills!"

True words, well spoken! For enduring pain and porcupine quills have long been linked in synonymity. Yet, in reply to the charges of each quill-wounded plaintiff, Mr. Needles can honestly lay claim to a uniform habit of minding his own business.

Trouble is one thing he dearly loves to avoid. But if the enemy insists on a fracas, Porky resignedly assumes his you're-asking-for-it stance and *something's gotta give*.

"Porcupine" originally meant "pig with spines." The word must have been coined a long time ago, for the creature is referred to in some of the world's most ancient literature. Mr. Albert R. Shadle, of the University of Buffalo's Biology Department, re-

cently went beyond recorded history when he reported: "North American porcupines have a long history of occupation which extends back more than a million years to the Pleistocene Period . . ."

There are two types of porcupines in this country, the Canadian porcupine and the western porcupine. The range of the former is north-eastern U.S.A. (New England, New York, Pennsylvania, etc.), and Canada. The western porcupine may show up from New Mexico to Alaska. Both types belong to the a single genus and species, *Erethizon dorsatum*. But coloration is different. Canadian porcupines may have coats varying from almost black to grizzled brown or "tweedy" slate. Western Porkys show a definite yellow or greenish-yellow tinge to their pelage. Something else: the two types have inexplicably different odors, with the western type having a much stronger musky smell than his northeastern brethren.

In Pennsylvania the porcupine has registered an up-and-down census. Half a century ago, Mr. Porky had a pretty firm foothold in Keystone territory. Down the county alphabet, from Armstrong to Wyoming, porcupines thrived. Samuel N. Rhoads, who in 1903 wrote "The Mammals of Pennsylvania and New Jersey," recorded reports which included these indicative passages: "McKean county—*Porcupines*: So plentiful they're a nuisance; eating oil derricks. Forest county: Abundant, and on the increase; gnawing salt-saturated oil derricks. Clinton county: Numerous, from mountain-top country to banks of the Sinnemahoning. Armstrong county: Plenty in Buffalo Creek region. Wyoming county: Abundant. . . ."

Today, in some areas of the state, Br'er Quills is barely holding his own. Elsewhere, he's running the gamut from a steady decrease-in-numbers trend to an uphill struggle toward population gains. According to

a Pittman-Robertson Report (Project 37-R), Porky is faring especially well in cut-over areas where reforestation is providing food and cover in North Central regions of the state. While eight or nine northern counties rate at the top as favorite stamping grounds of the porcupine from 'way back, other counties would find it difficult to scare up a single specimen. Certainly it has been quite a while since anyone has reported seeing a porcupine in Fayette, Greene, Westmoreland, Washington, Allegheny, and perhaps a dozen other counties.

A thorough study of the porcupine and its habits reveals some remarkable and little-known facts. It also does away with certain fanciful claims long attached to Porky's reputation. Example: the porcupine cannot "shoot" his quills—not even for very short distances. And he does not roll himself into a ball when attacked. Also, porcupines *do not* hang from tree limbs and mate in a face-to-face position as has been stated by some

BUSINESS END of Mr. Porcupine features the large, chisel-like teeth. They are quite similar to those of the woodchuck and grow continuously throughout the animal's life.



of the most widely recognized early naturalists. However, as one wildlife expert pointed out: "The mature female porcupine, when aroused to anger by an unwanted suitor, can erect a rosette of quills that puts a speedy end to Cupid's purpose. But with the female's quills in a relaxed position, nature has wisely arranged for the safety of the male, and the mating process, which usually takes place in the fall, can be expected to occur in the normal manner . . ."

If you've heard that it is impossible to "shine" the eyes of a porcupine at night, you can safely register the rumor as fact, not fancy. For Mr. Porky is one of the extremely few four-footed creatures with eyes so designed structurally that they just won't shine in the dark.

On the true side of the ledger, too, is the claim that, in proportion to her size, the female porcupine gives birth to one of the largest young produced by any mammal. A baby Porky may weigh over a pound and a quarter at birth and measure a foot in length—actually a weight exceeding that of a black bear cub newly born to a mamma bruin weighing fully sixteen times as much as Mrs. Porcupine! The gestation period of the porcupine also seems far out of balance with its size, for the period from mating 'til arrival of the offspring ranges from 205 to 217 days, or about seven months!

If anything can prove that the porcupine is not a "clumsy dolt," or one of the other uncomplimentary names with which he's frequently tagged, the baby porcupine offers some convincing evidence in that direction. Here's why: within the first hour after birth it responds to calls from its mother who, like a well-trained puppy, sits up, forepaws hanging limp, while the youngster locates the source of his nourishment. The baby Porky arrives complete with his first eight teeth—all functional—and his eyes wide open. His

quills, well-developed and about half an inch in length, are ready for action as soon as they are dry—usually a half hour after birth.

The mother will make little or no effort to protect her young, for she seems instinctively to know that her offspring is fully capable of making things pretty miserable for any molesting smart-alec. When he's two hours old, the quilled infant—correctly called porcupette—can demonstrate startling muscle coordination. Within two days, he's able to climb. His nursing period is short, for Mamma Porcupine likes to get her little one on solid foods in as little as ten days. Multiple births are exceedingly rare.

The porcupine does not hibernate in winter. If the weather is unusually cold and blustery the animal may shelter for a few days, but since his food consists almost entirely of the inner bark of trees in winter, he can lumber outside almost anytime and munch a quick fill of the succulent cambium layer of bark in one of his favorite tree flavors—evergreens, birch, willow, elm, poplar, apple, wild cherry, or maple. His home may be in any dry, protecting cavity—in a rock ledge, a hollow tree, etc. There are no cushioning leaves or other padding materials. Even Mrs. Porcupine does without such luxuries and bears her young in an unlined nest, as if to prove the innate hardness of the species!

Along about dusk, the porcupine starts to plan a busy night, for he's about ninety-five per cent nocturnal under average environmental conditions. Since he never stores food in his den, the spiny fellow must go abroad when hunger pangs urge the rounding up of a meal. During warm weather the porcupine does a great deal of ground feeding. Almost any kind of vegetation will do—even domestic field and garden crops if they're handy. (One resident of Maine trapped 65 of the creatures among his apple trees at fruit picking time in 1949).



ALBINO ANIMAL is always a rarity but this female porcupine, shown with her normal colored young, is a one in fifty thousand occurrence. Porcupines shake themselves like dogs to rearrange their coat. The quills drop out sometimes but they do not "shoot" them.

Porky also has in insatiable craving for salt. This everpresent hunger for sodium chloride frequently gets him in deep trouble, for he may gnaw boat oars, axe and other tool handles, leather items—even stairways and doorsteps in hunting lodges and summer homes—or anything his teeth will chisel if it bears the slightest trace of perspiration salt. In regions where the animal is plentiful, such as parts of Wisconsin where there is a porcupine population of better than one for each ten acres of hardwood-hemlock growth—property owners who have cabins and lodges standing vacant most of the winter have learned to successfully appease Porky by putting out convenient blocks of salt.

It is a common misconception that the porcupine is protected by law throughout much of the United States because it is considered the only slow-moving animal which lost hunters can easily kill for food. Actually, the animal is protected in

only a few scattered localities. Vermont even had a fifty-cent bounty on Br'er Quills until early in 1957 when it was dropped because the legally acceptable proof of the kill was a pair of Porky ears and "It was discovered that some hunters had been able to fashion as many as sixteen pairs of ears from the quill-less short-haired underparts of a single porcupine skin."

As for famished hunters turning to the animal as a source of food, Mr. Donald Spencer, a Fish and Wildlife Service biologist, comments: "How many hunters do you know whose lives have been saved over the past half century by being able to kill and eat a porcupine? In northern Canada and Alaska, conditions are entirely different . . . When lost or stranded by storm, the life of the hunter or trapper is dependent on the availability of food . . ." Spencer further points out that big game hunters who do become lost each year in the U.S.A. usually perish



LETHAL END of the porcupine is the quill-equipped tail. The "quill pig" will usually protect his tender nose when attacked by burying it between his forepaws but will turn his rear end towards the attacker. The quill-studded tail swings back and forth vigorously and upon contact, can leave as many as 200 quills buried in the foe.

from exposure and injuries, not starvation.

The flesh of the porcupine can provide only fair eating at best. The Indians relished it, but any informed epicurean will have to admit that Old Man Quill-Pig carries more external parasites than his share. In fact, of all animals examined throughout one of the Pittman-Robertson projects, Porky held the unenviable distinction of being the most highly parasitized. To make matters even worse for the gourmet with an eye on a porcupine, the National Geographic Magazine adds: "It is doubtful if the porcupine will ever gain general favor in the States as food . . . the excessive internal parasitism by tapeworms and roundworms would rule against it . . ."

The strong incisor teeth of the

porcupine continue to grow throughout the animal's life, and only normal use keeps them sharp and normal in shape and length. The enamel on the teeth is orange-colored instead of white.

Further assaying of the porcupine's anatomical make-up reveals that his eyesight is not very good, and his hearing isn't exactly keen. Indeed, all senses except that of touch (taste undetermined, of course) seem rather dull in the porcupine, for even his sense of smell is rated as poor. But he is an excellent climber, and he does have *those quills*, which alone can make up for a great many physical shortcomings!

And, speaking of *those quills* Porky wears an average armor of about 30,000. They are strong, but amazingly light—about 4,000 to the

ounce! Special muscles in the skin give him perfect control of the prickly arsenal at all times. And he's so sensitive to touch that the slightest contact with just one of the long tactile or guard hairs can trigger swift erection of every barbed bristle on his body.

The quill-equipped tail of the porcupine in his most lethal weapon. It is a strong, club-like tail, quick to strike at offenders. Usually, when attacked, Mr. Spines will protect his tender nose by burying it in a handy crevice or between his forepaws. Then, with his entire complement of quills at full mast, he starts to lash that wicked-looking tail. The spine-studded swinging appendage, upon contact, can drive as many as 150 to 200 quills deep into the anatomy of the foe. Although the quills rarely carry infection, and no natural poison, they do have the terribly distressing habit of steadily working their way deeper and deeper into the victim's flesh.

"The Animal Kingdom", edited by Frederick Drimmer, tells of a man named E. C. Morris who found a panther which had died as a result of seventeen imbedded porcupine quills. Some of them had worked their way into the eyes and on into the brain! Foxes, eagles, coyotes, and lynxes have also been found dead as a result of porcupine quills penetrating vital parts. Numberless dogs—often indicating a sad moment of curious departure from pursuit of the fox or the 'coon—have returned to their masters with a snoot full of quills.

If the quills are removed at once—and the best way to remove them is to yank 'em out with pliers or heavy tweezers—damage usually amounts to nothing more than soreness that lasts a few days. If the shafts are broken off and the points remain in the victim, the tiny scale-like barbs, aided by natural muscle action, continue to penetrate so inexorably that, frequently, even though a porcupine may be killed, he will get posthumous

revenge. For his contacting assailant may suffer great pain for weeks before the motile barbs finally reach a vital spot in the head or body.

Porcupine quills have long been used by Indians in the fashioning of various ornamental objects and as costume decorations. The Ottawa Indians still make knickknack boxes from porcupine quills tightly woven into a veneer over birch bark framework. These are tinted and polished to a high luster.

The Sioux Indians are adept at decorating moccasins and plaid slippers with the durable quills of Mr. Porcupine. In some instances the longer quills—usually they reach a length not exceeding $3\frac{1}{2}$ inches—are used to form flashily dyed "wrap-around" stitchwork. Shirts and robes also have been decorated with Porky's quills. Crow Indians sometimes used the quills to put fancywork on elk-skin robes. Many example items may today be found in the Denver Art Museum. These uses, as one observer put it: "Provides some sort of enduring and passable answer to an oft-repeated question, 'what the heck's a porcupine good for anyhow?'"

There have been many discussions on the topic of Porky's damage to trees, caused by scars left after feeding. These result in slight spot damage, or in the case of complete girdling, total loss. Apparently the discussions usually boil down to these conclusions: If the porcupine is so numerous that his wintertime feeding habits cause noticeable damage to timber, then his numbers should be reduced. But if the porcupine is present only in scattered numbers, then timber losses can be expected to give scarce reasons for severe treatment of the bristling rodent.

In doing a great deal of research on the porcupine, the author could nowhere find indications that those who are really acquainted with the animal wish him harm. Control, yes. Eradication, no.



FIELD NOTES



Tiger Of The Skies

INDIANA COUNTY—Early in April, while conducting a census of the pheasant and quail populations on the Conemaugh River Reservoir, I observed a marked decline in the number of quail present in one area. I searched the fence rows, brush piles and woods in the immediate vicinity in an effort to determine the cause of their disappearance. The mutilated bodies of several quail were found. There was evidence that they were the victims of predation from the air. My belief that the quail were killed by flying predators was confirmed when I found three quail bands in as many owl pellets. The owl pellets were found beneath a big oak tree which was growing in the middle of a large cultivated field. A great-horned owl's nest was located within a half mile of where the owl pellets were found. One adult and two young great-horned owls were taken from the nest. Game Protector Bruce Catherman and I examined the nest and found the remains of

the following animals in the nest: the rear halves of two adult rabbits; two whole young rabbits; one flicker; one red-wing; one ring-necked pheasant and the remains of other small animals that were not identified. This incident was ample proof for me of the great-horned owl's skill as a hunter and destructiveness as a predator. —Research Biologist Kenneth Gardner, Indiana.

Clean Streams For More Wildlife

MONTGOMERY COUNTY—On April 23, 1958, Fish Warden Antolosky and myself were patrolling the Schuylkill River in Montgomery County. We were checking fishermen and also taking a duck and goose census on local nesting conditions. This river certainly is a good example of what the clean streams program can mean to fishlife and wildlife. When the river was dirty and full of silt the fishlife was practically nil and there were very few ducks and geese nesting along its banks. However, since the river has been getting cleaned up it is fast becoming one of the best fishing spots in the county. In addition to this the waterfowl are using it more and more for nesting along its banks. One incident which we observed this day was quite interesting. We came to an island in the middle of the river which is about 100 yards long. We docked the boat and checked the island over and counted seven nests of Canadian Geese which had a total of thirty-one eggs in the nests. Further down river we found two more goose nests. All this adds up to what clean streams can mean to our wildlife.—District Game Protector W. E. Shaver, Mainland.



Battling Bittern

ADAMS COUNTY—During April I received a call from Mr. Robert Lott near Brysonia asking me to identify a bird which he and some of his employees had found on one of the Lott farms. The description which Mr. Lott gave by phone seemed to fill the bill for an American Bittern—and a later visit to the Lott farm confirmed the identification. Mr. Lott reported that the bird had been observed on one of his farms and appeared unable to fly. An examination did not reveal any serious defect and Mr. Lott released the bird. It was an event of interest in the area because none of the persons seeing the bird had ever observed one before. Incidentally, the area is not one in which the Bittern would generally be found—but I wondered how many persons passing marsh or swamp areas have observed the American Bittern standing still, beak pointed sky-ward, and have just dismissed him for a stump standing in the marsh. In handling the bird, Mr. Lott learned that there was a lot of power in the long, strong beak—a few painful “nips” by Mr. Bittern revealed that he could take care of himself in a battle.—District Game Protector Paul Glenny, Gettysburg.

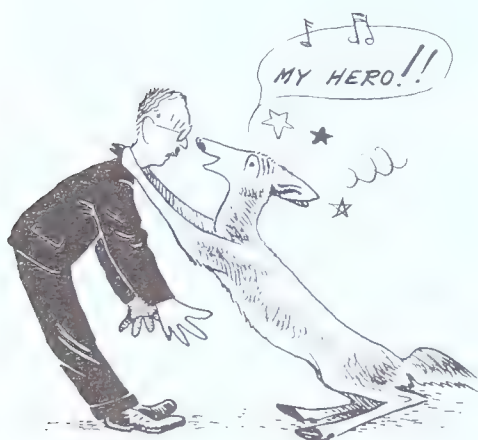


Late Sleepers

WYOMING COUNTY—Bears in this area are usually up out of the sack and stirring around by the middle of March but this year they overslept almost a full month, due no doubt to the heavy blanket of snow which remained in the mountains of Wyoming County until late in April.—District Game Protector Thomas W. Meehan, Mehoopany.

Fluttering Fool

ERIE COUNTY—During April, I located a Kildeer's nest. The nest was just a small depression on stony ground that had very little cover. There were four eggs, about the size of those of a pheasant, in the nest and their mottled color blended so well with the stony surrounding area that they were hard to spot. The mother Kildeer puts on the best crippled bird act of all the birds to lure an intruder away from her nest. This one was no exception for she would permit me to get within just a few feet of her as she fluttered on, apparently helpless and just managing to keep out of my reach. When she decided she had lured me far enough from her nest, she took to the air with the greatest of ease.—District Game Protector Elmer Simpson, Union City.



Artificial Respiration

ERIE COUNTY—Recently Deputy Howard Gay related the following incident to me: One of the residents of this district was enroute down into one of the more famous deer counties during this past season. While traveling east on U.S. Route 6 he came upon a situation, which at first looked somewhat odd. The motorist noted that a deer had been hit by an automobile and he also noted that attempts were being made to save the deer. The deer lay helpless but soon "came to" after artificial respiration had been administered for a few minutes. According to the report, which we believe to be reliable, the deer was brought back to normal breathing only through the artificial respiration.—District Game Protector Roger J. Wolz, Albion.

Ringnecked Traffic Patrol

MONTOUR COUNTY—On April 24th, I was watching a ringneck cock-bird and his 'harem' of seven hens feed across a barley field and onto the berm along Route 54 north of Washingtonville. The traffic on the highway was quite heavy at the time with a car or truck passing about every minute. As the vehicles approached, this old cock would stand by the side of the road, stretch to his full height, beat his wings and

squawk so that you could hear him for two blocks. After repeating this show at least a dozen times there was a lull in the traffic and he walked to the center of the road and waited while the hens scurried across. Just as they had all gotten over, another truck came bailing down the road and the old cock dashed across to the hens. As they entered the grass safely he stood along the berm and with wings whirring he told the world what he thought of cars and their drivers, then very calmly took his girl-friends and continued safely on their way. I don't claim to be an interpreter but I think that old cock was telling those drivers that in the fall they came after him with guns and dogs and since he had out-smarted them then, they could at least give he and his girl-friends a little consideration and peace the balance of the year.—District Game Protector George A. Dieffenderfer, Danville.

Any Port In A Storm

BERKS COUNTY—On Thursday morning, March 20th, the day before spring, my wife and I awoke at 5:30 a.m. to get ready for work only to find it had snowed all night and was still snowing. It eventually ended in a twenty-six inch snowfall on our farm. Unable to get to work we went back to bed. A few minutes later we heard a noise as if something was hitting against the window pane. I got out of bed to investigate, and finding nothing upstairs, I went down to the cellar. There was a ringneck standing in the snow pecking at the window pane in the cellar window. He then walked around the house pecking at all the cellar window panes. Since I feed the pheasants on our farm during the winter I had some ear corn in the cellar and I shoveled the snow away from the windows and put some corn out. Practically all day he walked around the house pecking at the window panes and eating corn as he went.

For many days after that, he made several trips daily around the house pecking at the windows and eating corn. We gave him the name of "Woody" because he sounded like a woodpecker. Almost any time of the day we could look out an there stood "Woody". It is now March 29th and "Woody" is still making his rounds daily, he even eats corn off the front steps.—District Game Protector J. A. Leiendecker, Reading.

Deer Damage

INDIANA COUNTY—During the past several months, I have had more deer damage than ever before. Frank Wilson, R. D. #2, New Florence, Pa., deer destroyed 184 shocks corn, Dan Beers, R. D. #2, Blairsville, deer destroyed 4,500 three year old Christmas trees out of 5,000. William Myers, R. D. #1, Indiana, Pa. had 9,500 trees destroyed out of 10,000. James W. Daub, Pittsburgh, Pa. planted 32,000 trees and had 75% destroyed during winter. Bob Henderson, Ise-lin, Pa., severe damage to apple orchard. Fred Musser, Indiana, Pa., largest tree planter in country will not plant any more trees in Brush-valley Township due to deer damage and many others have called to complain about the deer.—District Game Protector Bruce W. Catherman, Indiana.

Jet Age Gobbler

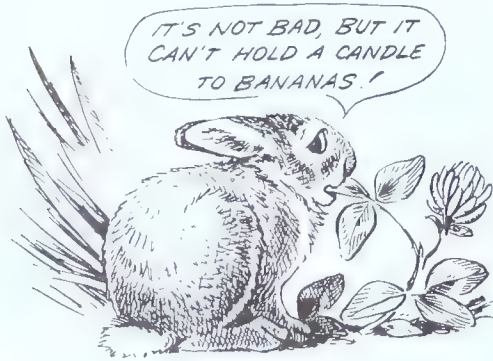
BEDFORD COUNTY—During the past month spring evidenced itself in many ways—including the drumming of grouse and the gobbling of the tom turkeys. Once Turkey Gobblers begin their courtship strutting and calling it is generally quite easy to have a gobbler talk back to a foreign noise. Quite often the sound of a tractor or a running chain saw brings a gobble—other times clapping one's hands, imitating the whistle of a hawk or striking against the side of a car has the same effect. One old tom on State Game Lands No. 73, however, pays no attention to these sounds but will gobble when hears

a jet plane flying over. This fact was first noticed while in company of the Hon. Wm. Fluke, former member of the Game Commission. I checked one day last week while working in the same area and without fail—through the middle of the day—whenever I heard a gobble within seconds I was able to hear or see a Jet aircraft passing over.—District Game Protector Nicholas M. Ruha, Everett.

It's A Dog's Life

CLINTON COUNTY—On Sunday, April 13, Deputy Hake picked up a small hound that was running deer in the vicinity. It had a collar and a current license. On further investigation he found the owner of the dog and returned it to him stating that he would be contacted about it. We went to the man's home the following evening to talk to him about his dog running deer. He immediately put on his hat and coat, got his gun and disposed of the dog. Needless to say, due to the man's actions, he was not fined.—District Game Protector Ivan L. Dodd, Lock Haven.





Banana Bunny

HUNTINGDON COUNTY—On April 10, my wife and children adopted two bunnies which had been orphaned due to a grass fire near the Raystown Dam. One had a broken leg and died the following day but the other seemed to thrive quite well during the fifteen days it remained in our home. The normal diet consisted of milk, carrots, celery, lettuce, apples and clover plus bananas. Regardless of the amount of green foods consumed, it was always ready for banana handout, often sensing the banana odor as much as 15 feet across the living room. Freedom seemed to over balance bananas though, because we haven't seen the bunny since his release.—District Game Protector Richard Furry, Huntingdon.

Survival Of The Fittest

GREENE COUNTY—Proof that our pheasants can survive under poor conditions was reported to me by a Mr. John Lewandoski, of Crucible. He stated that last fall just prior to hunting season he saw a hen pheasant around his home on several occasions with only one leg. He said that he was very much surprised to see the same pheasants several times so far this year and that it was in very good shape in spite of its handicap.—District Game Protector Richard L. Graham, Carmichaels.

The Beaver Went Over The Mountain

NORTHAMPTON COUNTY—Weather conditions in the early spring probably caused wildlife to change its normal living habits in many instances. In the early part of April a single beaver wandered several miles from its home into Northampton County. The closest known beaver is probably four miles from Pen Argyl, but this beaver wandered across the mountain into a heavy populated area, where he was struck slightly by an auto. The beaver was not seriously injured, but he was picked up and transferred to another area where his chances for survival were not jeopardized by mechanical predators, such as the automobile.—District Game Protector H. W. Wiggins, Nazareth.

Peek-a-boo

VENANGO COUNTY—I was checking the results of cutting a hedge for game cover recently when an odd-looking animal took out from a pile of the cuttings. It was difficult to identify what it was due to heavy brush and the fact that all-nite rains had pretty well soaked the long hairs into one mass. Not until it ran a short distance, turned around, and began to bark did I realize that it was a Pekingese dog. I was about 300 yards from any road. Need I say that I had a good conversation with myself, but the little fellow continued to bark. It was real indeed. After returning to the house, I canvassed the immediate neighborhood but with no success. My efforts to catch the stranger were unsuccessful; it kept itself well protected in the brush pile. My inquiries soon found the owner, however, and that evening there was a happy family reunited with their favorite pet. "Cuddles", as it was called, found awaiting arms.—Conservation Information Assistant Robert D. Parlaman, Franklin.



Of Farmers and Chuck Hunters

By Dick Drew

HE was a young farmer, bitterly opposed to anyone hunting on his land and known far and wide for the stern measures he meted out to trespassers.

It is only fair to state, however, that he was justified in his attitude. One year trespassers killed some of his domestic mallards which had been pinioned and could not fly. Another time someone stole a boat from his farm pond some distance from and out of sight of his house. On more

than one occasion pasture bars were opened and he had to spend valuable time locating his cattle.

Late one afternoon, early in summer, he gave me the surprise of my life. I was driving by his farm just as he returned from putting his cows in the night pasture. He yelled to me "Hey! I want to talk to you. If you have enough time, I would like to show you something."

After parking my car in his yard, he led me to his garden in the rear

of his home, and showed me two rows of early peas that had been completely ruined. "Look what the rabbits are doing to my garden. They're eating a lot of alfalfa too." "Rabbits didn't do that. Woodchucks did it," was my reply. "What those d---d things! My farm is full of them. Whoever named them 'woodchucks' must have been out of their mind. They live in the fields, not the woods" he retorted.

About this time there was a flash of lightning, followed by the roll of thunder in the Western sky. A shower was moving toward us very fast. "We're going to get a shower, so you can't hunt chucks. Why not come into the house and tell me some of the things about chucks that I don't know?" was his surprising rejoinder. His wife was placing food on the table when we entered. I was promptly invited to join them in their evening meal, but told them I had eaten early, and we compromised on a cup of coffee.

For a long time, I held the center of the conversation explaining to them that the Latin name for woodchuck is *Marmota Monax*; but the Pilgrims called him woodchuck because at that time he lived in the woods, and reminded them of the hedgehog of Europe. The new name he thus acquired is a combination of the words "Wood" and "chuck". "Chuck" is a Dorsetshire word meaning "pig". Thus the new name "Woodchuck" literally means wood-pig, which is a misnomer today.

In this age, woodchucks are to be found most abundantly on the best cultivated farms. Our modern farms have furnished them with a menu of garden vegetables, clover, alfalfa and other farm products, so they have increased in numbers until they have been called many names one doesn't find in print.

"That's interesting enough, but how did you know that woodchucks ate the peas instead of rabbits?" asked Farmer Washburn.

"That's easy. You will notice that only the best peas were eaten, and the rest trampled down by the woodchucks as they waddled along. Sometime, when you see woodchucks eating alfalfa, watch them closely. A chuck will nibble off a blade of grass here, walk several feet and nibble off another, breaking down the grass between the two spots, especially in the spring when alfalfa is getting its first growth. Rabbits are inclined to graze more like sheep. It is surprising how much ground a woodchuck will cover during one hour of feeding."

Incidentally, how much value do you put on the peas you lost? "Probably \$10" was the reply. "How many woodchucks do you have on your farm?", was my next question. "Don't know exactly, but a lot of them," he answered. He was utterly surprised at my answer. "It looks to me like the loss of those peas will be the most profitable thing that has happened to you this year. He looked at me in amazement and asked "What do you mean?"

"Let's delve into the private life of the woodchuck a bit and see how it affects your pocketbook and safety. According to your statement, it is reasonable to assume there are forty pairs of woodchucks on your farm right now. They breed as soon as they come out of hibernation, and 28 to 32 days later from five to eight are born. Four weeks after that, they are out eating grass and stop nursing altogether. As you see, by the first of June, when your garden and alfalfa are the best, you have a fine crop of chucks feeding on them. Woodchucks have been known to have as many as ten in a litter.

"Close observers of the woodchuck declare they have two litters a year. I cannot prove this, but am inclined to believe it, as I've seen them breed in July and August, indicating a second breeding for the year.

"Now let's see what has happened



Photo by Maslowski & Goodpaster

WOODCHUCK UP A TREE is a sight not too often seen although the animal is fully capable of climbing. Groundhogs are more often seen feeding in farm fields. The Pilgrims originally called him woodchuck because he lived in the woods.

to your farm since the woodchucks came out of hibernation. If your forty pairs of chucks averaged a minimum of five to a litter, there are 200 young chucks in addition to the original forty pairs on your farm. Probably, there are more as some of the females must have given birth to more than five young.

"One well recognized authority has stated that a woodchuck will eat a half ton of alfalfa a year. Another places the amount at six pounds per day, still more than a half ton. If these eighty adult and 200 young chucks stay on your farm a year, they will eat 140 tons of grass, the equivalent of 70 tons of the best hay on your farm. A woodchuck will not settle for anything less than the best. At a fair price of \$40.00 per ton, this would cost you \$2800.00.

"Unfortunately, this is not all it will cost you to keep so many woodchucks. Once they have established

themselves on your farm, they let the world know it by digging dens in the very best fields you have. They plan them well, are good hydraulic engineers and practitioners of sanitation. They keep their bed above the water level, also the entrance, which may run twenty feet or more, slanting downward so as to form a sump, and then upward to the bed. They avoid clay and other types of soil where the digging is hard, and water will not sink quickly into the ground. They are fond of sand and gravel.

"Usually, there are one or more exits, in addition to the entrance to the dens. These are a menace to you, your help and your cattle. Not only are the repairs to damaged machinery expensive, but there is the likelihood of cattle or even adults breaking their legs by stepping into the exits, which usually go straight down, and are hidden by grass.

"There is always the danger of a tractor wheel dropping into a woodchuck's den, overturning and injuring or killing the operator. In one woodchuck infested section of New Jersey three farmers were killed in this manner in less than five years. Several suffered minor injuries, and at least three had to be hospitalized.

"Good Lord, man! I didn't know woodchucks were such a serious proposition for the farmer. What can we do to get rid of them? I don't have time to hunt or trap them, and gassing wouldn't do any good on my farm," declared the farmer.

"If I were a farmer, I'd get some reliable woodchuck hunter to shoot them off for me. If I didn't know one, I'd go to the County Extension Agent and have him recommend one.

"Thought you would say something like that. Suppose you are interested in hunting on my farm."

"Not particularly. I have more places to hunt than I have time for it, and in most cases the farmer has asked me to keep the chucks under control," was my answer.

CURIOSITY sometimes gets the better of cats—and woodchucks. The big rodent will quite often come up from his den for a second look after he has been startled.

Photo by Leonard Lee Rue



"Well, I don't like a lot of people roaming around my farm, shooting first and looking afterward. They do more harm than good," he answered.

"I can fully appreciate the reason you think as you do. If I were in your place, I'd be inclined to take the same attitude, but, it would cost me a lot of money to do it. Your farm is posted the year around, which enables you to take care of trespassers. There are several reliable chuck hunters in this section, who would be glad to help you and it wouldn't cost you either time or money.

"The sun is breaking through the clouds, and we still have nearly two hours of daylight. Let's go out to one of your fields, where there are plenty of chucks, and I'll prove to you that they can be shot without danger to you or to your cattle, or damage to your property."

Driving down a long lane, we came to a spot where there is a large meadow with a hill in the background. As the car stopped, some chucks, that were feeding after the shower, looked, and then scuttled into their dens. "Did you see those chucks over there?" I asked. "We'll walk down to the edge of the woods, so their dens are between us and the hill. I think, when we are through, you will have a few less chucks."

"You can be my 'spotter.' When I see something too far away to be sure, you can use the binoculars and tell me if what I see is a chuck, and not a stone or clod of dirt.

"The chucks that were feeding were not badly scared, so they will probably come out again. We shall know in a few minutes.

"Look over at the base of the hill about 200 yards to the left. I think that 'gray stone' is a chuck's head just above the grass." "It surely is," said my farmer. "Before I shoot, I'll tell you this rifle sounds like a 'young cannon,' but it is safer than

a 22 rimfire because the bullet disintegrates when it hits, instead of ricocheting. Now watch."

Placing the crosshairs of my scope at the edge of the grass, I squeezed off the shot, and there was one less chuck for the farmer to feed.

Before dark we got a couple more chucks, and he was over enthusiastic. His plea was "Wish you'd come down every night for awhile and clean out some of these chucks" "Can't do that," I replied, "but I'll try to get down once a week. You see, some of my old friends are depending upon me to do for them just what you want me to do on your farm."

Soon, if I were a day late getting down to his farm, next time he would ask me what had happened. At noon, one day late in August, he called me and in an excited voice said, "There's a fellow down here by the name of John Pierce and he wants to hunt chucks. Says he knows you and has hunted with you. Is he all right?" "He surely is," I replied. "He's from the southern part of the State, and a swell fellow. I'm sure you will like him, and he won't give you any trouble." Once or twice after that, he called for the same purpose.

One sunny afternoon, late in the season, he came out where I was trying to get a shot at a "well educated" old chuck that knew all the tricks of the trade. Again he surprised me by saying "Woodchuck hunters are a pretty good bunch after all. They have saved me a lot of money this year."

My reply was, "The real woodchuck hunter is one of the best friends a farmer can have. Most of them have the farmers' interest at heart, and they and the farmer soon become good friends." That's what happened between this farmer and me. Better still, although he keeps his farm posted, he permits hunters who come to him and ask permission, not only to hunt woodchucks, but upland game as well.



Hal Harrison Photo

CLEAN MISSES are part of the woodchuck hunting game. The animals don't normally stray too far from the safety of their underground burrow and those that have been shot at very much get to be experts at disappearing below ground in a hurry.

It has been my privilege to have lived among farmers for the greatest part of my life, and to have worked closely with them, attending their meetings and discussing their problems with them. It is also my privilege to be personally acquainted with a majority of the farmers in the county where I live, and fully half of them are close friends. Of them, I don't know a half dozen who posted their farms from choice. In this, my sympathy is with them. But, when I think of what our sons and grandsons are facing in comparison with the privileges I have enjoyed, it makes me feel downright depressed.

Right now, there are many hunters who are just as worthy of having the privileges I enjoyed, as I, but don't and through no fault of their own. Let's not only conduct ourselves properly, but to do everything possible to make others behave themselves likewise, so we can keep the hunting privileges we still have left to us.



CONSERVATION NEWS



Deer Browse Takes Heavy Toll of Young Tree Growth, Pocono Study Shows

Animals feeding on the stems of young trees can hold back forest growth. This has been established by a 5-year study of deer and rabbit browse made by the Northeastern Forest Experiment Station of the U.S. Forest Service on its Pocono Experimental Forest, Gouldsboro, Pa.

Several wire exclosures (1/40 acre) there prove that deer do hinder natural tree reproduction—except for beech and striped maple—while rabbits at their present populations have little effect on tree growth.

Inside the exclosures, reproduction is dense and tall—more than adequate for future trees. Some of the protected seedlings are an inch in diameter and 12 to 15 feet tall.

Outside the exclosures there is little woody growth except for beech and striped maple—and commercially they are the less desirable species. Seedlings of desirable trees are few, none over 4 feet high.

Comparison of the average number of seedlings per acre over a foot tall is striking: black cherry inside exclosures 2,507, outside 160; sugar maple 753 inside to 0 outside; red maple 1,227 inside, 13 outside; beech inside 1,527, outside 2,880.

It was noted on the Pocono Forest that logging slash seems to protect hardwood seedlings from being browsed. Additional studies suggest that directional felling of harvested trees, logging and piling slash, and other similar methods may effectively reduce deer browsing of desirable hardwood reproduction.

First National Conference On Outdoor Education Stresses Desirability of School Camping

The First National Conference on Outdoor Education, which called together educators, conservation and park officials and members of youth organizations and recreation agencies, was held in Washington, D. C. earlier this month.

Approximately 150 participants from all parts of the nation met for two days to study the various types of outdoor education programs developed at local, state and national levels, and designed to help youngsters get the most out of their education, both in the classroom and the out-of-doors.

"We believe that education in the outdoors will combine the teaching of skills as well as provide a laboratory for subject matter learning," said Julian Smith, Director of the Outdoor Education Project sponsored by the American Association for Health, Physical Education and Recreation.

One purpose of the conference was to find ways to get more outdoor education programs started in schools, one being to provide camp programs for year-around use by youngsters. More than 500 school systems in the country now have camp programs which offer opportunities for children to combine recreation with specific field study, while benefiting from experiences in community living that are not obtainable at school or at home.



OUTDOOR EDUCATION PROJECT for Brockway Area Schools was again held at the Commission's training school in Jefferson County May 14-16. The project was attended by 105 sixth grade students and their teachers who came by bus to the school grounds each day for on-the-ground training in conservation.

Survey Discloses Recreational Use of Commercial Timberlands

Nearly 43 million acres of commercial timberlands are open to public hunting, the Wildlife Management Institute reports. This is one of the disclosures of a survey by the American Forest Products Industries that covered 74 per cent of all industrial timberlands in the United States.

The survey report showed that 42.7 million acres, or 92.4 per cent of the study coverage, are open to hunters in season. Only 2.6 million acres are closed because of fire and logging safety, or other reasons of the owners. The public may fish on 44.5 million acres of industrial timberlands involving some 55,928 miles of lake and stream shoreline.

About 32.3 million acres are open to all public recreational uses without a permit or special pass. Public-use permits are required on about 16 per cent of the forest area studied, and 2.9 million acres are open under a permit system to only neighbors

and special groups. About 1.9 million acres of industrial forest land have been leased to hunting clubs.

Some industries reported programs for stocking fish in streams and lakes and 44 established food patch areas for big game. Thirty-one of the 455 companies contacted employ fish and game specialists. Sixty-five companies established public parks and present planning includes the enlargement and creation of additional park grounds. About 1.5 million persons recreated on industrial forests in 1955, and 127,490 big game animals were taken by hunters.

It was stated that their recreational use undoubtedly would be greater if more persons knew whether a company's land is open to recreation. The companies have no uniform policy—mostly for insurance reasons—of making known that their lands are open for recreation. Lands not bearing a 'welcome sign' necessarily are not closed, and each company should be contacted individually.



PGC Photo by Parlaman

HUMAN PREDATOR damaged this wood duck nesting box erected by the Game Commission in Venango County. Unknown persons shot holes in box while the female duck was nesting, killing the duck and destroying the eggs. Shown inspecting the damage is District Game Protector Clyde Decker.

Leaflet Shows Progress Being Made in Out-Smarting Wood Duck Predators

The latest ideas in wood duck nest boxes, designed to give the conservationist the upper hand in his long, running fight with wood duck predators and interlopers, are described in Wildlife Leaflet 393, prepared by the Department of the Interior from the findings of State agencies and the United States Fish and Wildlife Service.

The wood duck, a popular game bird in parts of the East and in portions of the Pacific Coast States, has been in somewhat of a plight because of the scarcity of its favorite nesting places, tree cavities. Biologists, technicians, and just plain sportsmen and birdlovers have tried to fill the void by creating artificial nest boxes, some made of wood and some of metal.

But raccoons, fox squirrels, bull snakes, rat snakes and mink have had signal success in raiding these nest

boxes, especially the early models. There is one instance listed in which predators destroyed nests in 21 out of 24 boxes.

To add to the woes of the wood duck and to those who build nest boxes such things as starlings, white-footed mice and tree squirrels have pre-empted nest boxes for themselves to the exclusion of the wood duck. Even opossums have used the boxes as dens and bees have moved in and defied eviction.

Probably the raccoon has been the most predacious, pestiferous and resourceful; and against him many predator-proofing efforts have been made—now with considerable success.

The leaflet shows ways and means which State agencies and the Bureau of Sport Fisheries and Wildlife have tackled the problem of predator-proofing wood duck nest boxes. Diagrams of boxes which are proving successful, techniques for erecting the boxes and tips on how to maintain them are contained in the publication.

East to Host 24th North American Wildlife Conference

The 24th North American Wildlife Conference will be held March 2-4, 1959, at the Statler Hotel in New York City, according to the Wildlife Management Institute, sponsor of the large international conservation meetings.

The announcement of the 1959 meeting site was made at the close of the 23rd North American Wildlife Conference held last March in St. Louis, Missouri. Among the nearly 1,100 persons who registered and attended this recent conservation meeting were natural resources administrators and leaders, fish and game technicians, outdoor writers, and sportsmen from 47 States, the provinces of Canada, Alaska, Mexico, Hawaii, and Puerto Rico.

Foresters Await Growing Season to Gage Effects of 1957 Drought

The true effects of the 1957 drought should become more apparent this summer, but still it may be several seasons before a full evaluation of the dry-weather damage can be made.

This prediction is made in the 1957 annual report of the U.S. Forest Service's Northeastern Forest Experiment Station, with headquarters in Upper Darby, Pa.

A drought that kills trees also greatly intensifies symptoms of wilt and dieback diseases. Thus, symptoms of a disease can be misleading in judging its severity and abundance.

The wilts—Dutch elm disease or *Verticillium*—are usually more conspicuous during hot, dry weather. As a result, these diseases appeared more severe and abundant than usual during the drought. However, their true extent will not be known until this summer or even much later.

It is not surprising that 1957 was a bad dieback year. But just how bad will be more apparent after the 1958 growing season.



Game Protector Mark Hagenbuch Retires With 25 Years Service

Game Protector Mark C. Hagenbuch, of Bloomsburg, Columbia County, retires July 1. He joined the Game Commission as an assistant game protector in Lycoming County on July 1, 1933 and has served faithfully and well since. For the past 23 years he has been assigned to Columbia County. He was born in Elinsport, Lycoming County and recently reached his 65th birthday. A testimonial banquet was held in his honor at Bloomsburg on June 16.



DEER QUADRUPLETS are as rare as human and have seldom, if ever, been found in Pennsylvania deer. These four unborn fawns were taken from a doe deer killed in a highway accident recently in Cambria County. Game Protector G. A. Miller reported the unusual incident, involving one male and three female fawns.



OUTDOOR FUN WITH A FUTURE



Let's Know Small Mammals

By Ted S. Pettit

WHEN most of us think of mammals we tend to think only of large mammals—deer, bears, beavers, rabbits, squirrels—those animals that are either game animals or furbearers. Rarely do we think much about small mammals—moles, shrews, mice, rats and bats—yet these animals are much more common and may be found almost anywhere.

Almost any woodlot, park, field, hedgerow or suburban backyard has some sort of a small mammals population that goes largely undetected, unless some of them get in our homes or in some other way draw attention to themselves. The chief reason probably, is that most of these animals are active only at night and most outdoorsmen aren't.

But these animals are important to know for several reasons. First, they are interesting in themselves, though difficult to observe, and many of them are attractive little creatures. But there are ways to get to know them and the more you know about them the more interesting they become.

But from a conservation point of view they are important to know for two reasons. Some of these animals destroy huge amounts of food products. Field mice, for example, devour tons of grasses and grains each year—grasses that are eaten by cattle that provide us with dairy

products. Rats and house mice eat or spoil millions of dollars worth of processed grain products that otherwise would go into food for mankind.

Many of these small mammals are themselves food for other animals that are interesting or important to us. Thus they have a place in the world of nature that we should understand better.

Skunks, weasels, foxes, hawks, owls, and snakes are some of the larger animals that depend in part or wholly on small mammals for a food supply. Occasionally, gulls and herons are known to eat mice. One small mammal—the shrew—will attack and eat mice or other shrews. Thus, the numbers of these small mammals help to determine the numbers of the larger animals that eat them. These small mammals are a sort of buffer, helping in one sense to protect game or domestic animals which the predators might feed on if the small mammals were not available.

How to See Mammals

Since most of these mammals are active only at night, it is frequently difficult to see them. Then too, they generally are wary of man and secretive in their habits and this too makes them difficult to see. But there are "tricks of the trade" that make it possible to observe, study and even

photograph many mammals. Using these "tricks" make any observations all the more interesting and exciting.

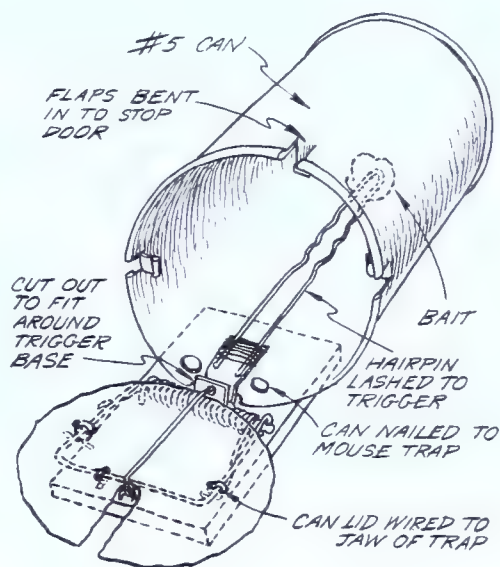
Use Bait

Several different kinds of mammals may be attracted to bait, where they may be observed. There are several ways to do it, but one way usually results in a two-way project.

Find an area out in the woods or on the edge of the woods where it is possible to dig up an area about ten feet square. Remove the sod or leaf litter to mineral earth. Soften up the earth with a shovel or pick and make it smooth.

In the center of the area place some bait. Then rig up a light over the bait so that you may turn it on from fifty or seventy-five feet away. Go back about midnight and as quietly as possible, sneak up and turn on the light. Many times you may catch a glimpse of animals before they run away. Sometimes the animals will stay there for a minute or two continuing to feed.

But whether you see them or not, they leave tracks in the softened



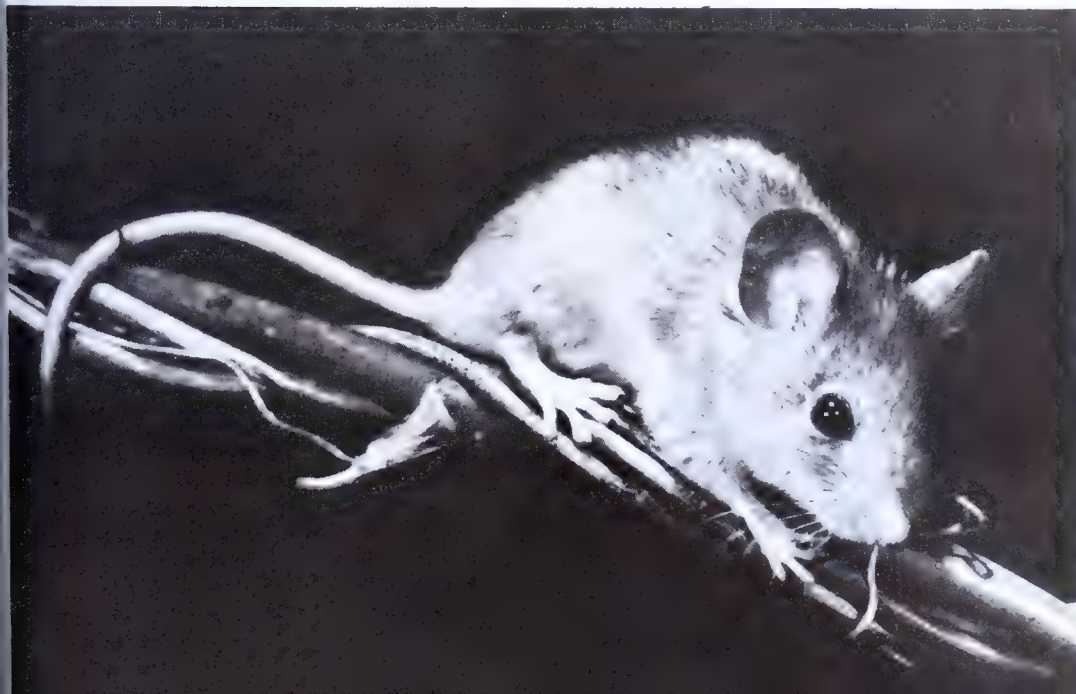
earth—tracks from which you may identify them and make plaster casts for a permanent record.

Food scraps, meat, nuts, peanut butter, salt, oatmeal, cornmeal, fish, bacon, or fruit, all are good baits and attract different animals.

A similar project is to make a small platform or shelf of a piece of

WHITE-FOOTED MOUSE, commonly called Deer Mouse, is an abundant rodent found all over Pennsylvania. Active at night, they frequent summer cottages and camps and may be destructive to bedding, clothing and food.

Photo by Maslowski & Goodpaster



board or plywood about two feet long by a foot or so wide and place it on a tree about three feet from the ground, or even on the ground. Bait it only with nuts, peanut butter, seeds, and small chunks of bacon. Place a light over it, with a switch twenty-five to fifty feet away. In the early evening hours, it is frequently possible to attract deer mice, jumping mice and other small mammals to such a feeder. It may take several nights for them to find it, but they invariably do sooner or later.

Some small rodents may be caught alive in traps, for observation or to be kept as pets. One of the easiest traps to make is made from a juice can, a mouse trap and six inch square piece of tin cut from another can.

Carefully drill two holes through the trap and juice can and fasten the trap to the can with small screws and nuts.

Fasten the piece of tin to the "snapper" on the trap with wire, so that when the "snapper" snaps it holds the tin against the open end of the can.

STAR-NOSED MOLE is one of Pennsylvania's oddest looking animals. The "star" on the end of its nose is actually a "feeler" with which the mole finds its way about long tunnels under the ground.

Photo by Lynwood M. Chace



Bait the trap with peanut butter, a piece of cookie or oatmeal mixed with water. Sometimes pieces of apple make good bait. Chipmunks, deer mice and other mice may be caught in this way. Bacon or meat will attract shrews to such a trap, or sometimes flying squirrels.

Another way to capture small mammals is to look for a runway in the grass or woods. Then, dig a hole in the middle and set a large tin can or sections of a stove pipe in the hole and smooth out the soil around the edges. Place some bait in the bottom. Small mammals may jump or fall in the can and because of the steep, slippery sides, they cannot get out.

Moles

Moles of one species or another are found over all Pennsylvania. They are seldom seen though, because they live most of their lives under ground in tunnels. Generally, they prefer a loose soil such as may be found in open fields and pastures or in well cared for lawns or golf courses.

The most common sign that moles are present may be seen after a rain, when burrows are made just below the surface of the ground. These ridges are the tops of the tunnels which the mole digs to enable it to find earthworms and insect larvae that live in the ground. Generally, the permanent mole tunnels are deeper down in the earth, ten inches to two feet from the surface.

Moles make nests in the ground, using leaves and grasses where two to five young are born in early spring. They do not hibernate, but are active all winter searching for food. Many of the insects they eat are those that destroy plant roots. Mole tunnels also help air circulation in the soil.

From the tip of their nose to the tip of their tail, moles are from four to nine inches long depending upon the species. They have very small eyes and no external ear. Their fur is greyish in color, soft and thick.



Photo by Leonard Lee Rue

FLYING SQUIRREL is another interesting nocturnal animal. It does not actually fly but glides for long distances from tree to tree. It has been known to glide 152 feet through the air starting at an elevation of 60 feet.

Their front feet are wide and usually face outward to make tunnel digging easier.

Moles eat some plant material in addition to worms and insects, but it is probable that much of the damage to shrubs and other plants blamed on moles is due to mice which use the mole tunnels as highways.

The most widely distributed of the moles are the hairytailed and star-nosed moles found over most of the state.

Starnosed moles are excellent swimmers being completely at home in a stream or small pool. Their tunnels frequently go into a stream where they feed on small water life on the bottom.

Shrews

One species of shrew, the Pygmy Shrew, is the smallest living mammal. It is scarcely more than two inches long and weighs about as much as a dime. Generally, shrews are the size of mice. They have long, pointed noses, beady eyes and their ears are completely or nearly concealed by their fur.

They may be found over all of Pennsylvania, but are rarely seen because of their secretive habits and their small size. They are probably

the most active of all mammals and because of this tremendous activity and small size, they must eat virtually all the time to supply their bodies with the energy they need. They eat much more food than their own weight each day. Their food consists of insects and insect larvae, worms, centipedes and snails, and occasionally mice and such plant materials as nuts, fruits and berries.

They live in the leaf mold and litter on the forest floor or make burrows in loose soil. Their nest is made of leaves and grasses and is placed under a rock, log or stump. Shrews may have two or more litters a year of four to six young.

Shrews have a pair of glands on their sides which give off an odor that repels their enemies. In spite of this odor though, large numbers of shrews are eaten by hawks, owls, weasels, cats and foxes. One way to discover which shrews live nearby is to look for owl pellets under an owl roost. These pellets are bits of bone, fur and skulls that the owl does not digest and spits out. Many times pellets contain skulls of shrews. Owls can find them even if we cannot.

The more common shrews are the short tailed shrew, the common shrew and the smoky shrew.



Photo by Leonard Lee Rue

WOODLAND JUMPING MOUSE is not too often seen. It weighs only about an ounce and although it may be 10 inches long from nose to tail, most of its length is in its tail. These mice hibernate for half the year.

Deer Mice

Deer Mice or white-footed mice are found over all of Pennsylvania. They are long tailed mice with large ears, large eyes and all are gray to brown on the back and white underneath, with white feet. These mice are active at night, coming out of their nests at dusk to feed.

Deer mice sometimes take over bird houses or old bird nests or squirrel nests for their own. They build their own nests also in hollow trees, in stumps, under logs, or even in houses or barns. They frequently move into summer cottages and camps and may be destructive to mattresses, pillows, clothing and food.

Captured deer mice make delightful pets and are among the most interesting of the small mammals to watch. As winter approaches they store up large supplies of seeds and nuts for winter food. Deer mice may have two or three litters of three to seven young a year. The young grow quickly and in scarcely more than a month, may have young of their own.

Jumping Mice

These are small mice, three to four inches long with long tails and large hind feet. Their tails are almost twice

as long as their body. There are two kinds—meadow jumping mice, which are yellowish brown in color and woodland jumping mice, which are yellowish on the sides, brown on the back and white on the tip of the tail.

Both mice live in burrows in the ground where they build a grassy nest. They spend the winter hibernating in their burrows and may spend as long as six months in hibernation.

These interesting little creatures are active at night and feed largely on plant life. Occasionally they may be found during the day under logs or rocks in fields or along hedgerows. At night in the forest, one may hear them jumping about. When disturbed, they flee with long jumps, some as far as six or eight feet. They may be attracted with food, but do not live well in captivity.

Voles

Voles of one kind or another are found over all of Pennsylvania. The most widely distributed of these animals are the field mouse, the red-backed mouse and the pine mouse.

Meadow mice or field mice are common in all parts of the state. As the name implies, they prefer fields

and meadows where they make runways in the grass and build grassy nests in protected places. They may well be the most abundant of all small native mammals, since in some places tests have revealed more than two hundred per acre and in other places several thousand. They eat vast quantities of plant material and because of their numbers, are tremendously destructive to food crops. They may have up to twelve litters of four to six young per year and these young may have young of their own in a little over a month.

Meadow mice are five to six inches long including a one to two inch tail. They are grayish in color and the tail is dark on top, lighter below.

Pine mice are four to five inches or so long with a short tail. They have rich, reddish brown fur and short ears. Despite the name, they live in hardwood forests where they burrow in litter on the ground and in soft earth underneath. They build nests in a shallow burrow, where two or three young are born. These mice eat grass roots, tubers and peanuts, or roots of farm crops. They occasion-

ally cause damage to trees by girdling roots.

The red-backed mouse is found in the wooded mountains. It is about six inches long with a short tail and is a brightly colored reddish brown on the back. This mouse is active day and night the year round, and it lives in the litter on the forest floor where it feeds on bark and other plant materials. They kill trees by eating bark around the trunk.

They build nests of grass on the ground in protected places such as under rocks or logs.

Woodrat

Woodrats or packrats are found in wooded areas over much of the state. They are from twelve to eighteen inches long, about half of which is their tail which has hair on it. Usually they have light colored feet and are lighter colored underneath and are well known for their habit of collecting bright colored objects which they hide. The most widely distributed kinds are Eastern Woodrat, Bushy Tail Woodrat and Desert Woodrat.

WOOD RAT or pack rat has the habit of picking up almost anything from jewelry to socks and hiding them. They are from 12 to 18 inches long, about half of their length made up of a hairy tail.

Photo by Hal Harrison



SLANTS and ANGLES



Game Feeder

Dear Sir:

You no doubt hear a lot about the winter feeding programs conducted by various sportsmen's organizations but I thought you might be interested in an account of what one individual has done. From January 1st to May 1st my fiancée, Miss Bertha Figart, and I maintained 13 hopper-type feeders (originally described in the January, 1957 issue of "Game News") which I devised and made. This type of feeder was extremely important to the success of our program since there was absolutely no loss of feed. I think the biggest attraction for the birds was that the grain was dry and mill-fresh at all times. The feeders were filled every Saturday. After conducting an experiment with various kinds of mixed grain, we settled on a mixture of 5 parts crushed corn and one part sun-

flower seed as most desirable. Our program was conducted in and about Lincoln Township, Huntingdon County and covered an area of approximately 8 square miles. In all we fed 880 pounds of crushed corn, 175 pounds of sunflower seeds, and 10 pounds of various mixes of other grain, for a total of 1065 pounds. The cost of the feed was \$86.18.

I hope this information may encourage other individuals to participate in a similar project and to gain the same enjoyment and satisfaction as we did. It was truly a wonderful sight to see the tracks in the snow all about these feeders each time we visited them and to know that all types of birds, especially grouse and quail plus small game had benefitted from them that winter.

William P. Schreiber
Altoona, Pa.

Old Deer Hunters Always Try

Dear Sirs:

Here is one for the books. Henry McCue, of Morrisville, finally shot his first buck in Pennsylvania's 1958 deer season after 37 years of hunting. He is not an amateur, either, having hunted and shot deer in Ontario, New Brunswick, New York, New Jersey, North Carolina and Utah.

James Addison
Morrisville, Pa.



HOPPER TYPE FEEDER devised by William Schreiber keeps the feed dry and reduces waste. It is made from discarded oil cans at low cost. Complete plans for this type of feeder can be found in the January 1957 issue.

What A Coon Hound!

Dear Sir:

Last winter I had the privilege of hunting raccoons with William "Bill" Owens of Ebensburg and his plot hound "Sally". Bill is a veteran hunter and woodsman who took 83 raccoons between October 15th and December 1st last year. Besides myself, the following hunters from Lost Cabin Camp in Potter County enjoyed this coon hunting with Bill and: "Sally" Everett Custer, Dr. Ellsworth, Dr. Rowland, Dr. Stollar, Dean Rowland, Jim Smalley and Sherman Griffith. We believe this could be a record kill of coon with one dog for a period of six weeks.

John D. Cox
Elizabeth, Pa.



Do It Yourself Gun Cabinet

Dear Sir: Enclosed are photos and information of a gun cabinet with new features, highlighted by a means of displaying guns breech forward. I borrowed this idea from Mr. Woltman, as he described it in the August, 1955 issue of "American Rifleman" magazine but I eliminated the artificial light used on his cabinet.

The upper part of the cabinet is made from a second-hand bookcase, of English Walnut, which I bought for about \$30. The inside lining I made from White Philippine Mahogany plywood. The base I designed myself. Sides and doors are solid American Walnut and walnut plywood panels. The wood was cut and partially assembled by a Philadelphia cabinet maker. The bottom and rear are of ordinary plywood; shelves are removable on pins; top board of the base is fastened with iron angles on the inside. The whole cabinet cost me about \$135.

Nicholas Kotikov,
Philadelphia, Pa.



HIBERNATING BEAR was photographed by Ralph Mason, of Cameron, near his home last winter. He was able to get within four feet of the sleeping animal without disturbing it. This bruin had located a dry, warm cave for his winter's sleep.

The Mouse That Is Not A Mouse

Dear Editor:

In the April issue on page 54 is a picture which is identified as the "meadow mouse" with the implication that these animals occur mainly on farms, probably in the open fields.

The little rodent pictured is, without doubt, the deer mouse or white-footed mouse (*Peromyscus leucopus*) which is more likely to be found along fence rows or in the woodlands. On many farms with the proper cover and environmental conditions, it might, of course even go to perhaps two thousand per acre as the photo caption indicates.

The rodent referred to in the article, however, is probably the ordinary field mouse or meadowmouse (which, incidentally, is a vole rather than a true mouse). Its scientific name is *Microtus pennsylvanicus*. This little vole is the one that is almost always most abundant in fields. It forms the main item of diet for the hawks that feed in meadows. This species, at times, is said to reach populations up to as high at 12,000 per acre in certain places of the Southwest.

This is perhaps an incidental matter but the photo may have mislead people who do not know the true

facts about field mice. The true meadowmouse (really the vole) generally lives on grass and small seeds and would not ordinarily be found invading the corn as is implied in the photo.

Roy C. Tasker
Professor of Biology
Bucknell University

How Old The Opossum?

Dear Sir:

In "The Story Behind The Cover" for your February issue, you mention that the opossum entered Pennsylvania about 40 years ago. I don't want to dispute the facts but when I was a boy of about 10 years of age back in 1890, I distinctly remember seeing opossums in our neighborhood. A few years later several of us boys would go to Wister's Woods hunting for opossums or other animals. Several times we found opossums in holes or among the roots of large trees. Germantown in those days had many places for wild animals to live. Gunning was not allowed so opossums, skunks, red and flying squirrels, rabbits, quail and woodcock were fairly plentiful. So if opossums were here in 1890 which is 68 years ago, your statement is short by 28 years. Of course, being that Germantown is not far from the Delaware and Maryland borders, the animals perhaps did not spread very much across the state until later.

Albert F. Flavell
Philadelphia, Pa.

Anyone For Old Game News?

Dear Sir:

Would any of your readers be interested in completing their old volumes of GAME NEWS? I have a copy each of back issues from December, 1935 to November, 1943. Anyone interested should contact me at this address:

Eugene C. Coskery, Jr.
Buttonwood Road, R.D.
Berwyn, Pa.



Group Shooting

By Tom Forbes

EVERY bowman enjoys the fellowship that comes from association with his fellow archers. Listen to the buzz of conversation and good natured bantering of the group at the practice butts before a field shoot or at the registration desk as friends meet and reminisce over previous shoots and discuss tackle and equipment. The time passes all too quickly; assignments are called out, and groups of four start to their assigned target. At an open tournament visiting bowman will generally register as a group upon arrival at the range and generally will be assigned to the same target. Except that they are shooting a different course, their companions

are the same bowmen with whom they regularly shoot their home field course. A large number of open tournaments permit registration from 10:00 a.m. to 1:00 p.m. and contestants arrive, shoot the course and depart without any opportunity to engage in conversation with their fellow bowmen from other clubs on matters of mutual interest.

At a target tournament a different atmosphere prevails. Contestants on the shooting line have ample time and opportunity to engage in conversation with archers on adjoining targets. The entire tournament is in full view of every contestant. In the morning round targets are assigned in the order in which entrants register. Scores are totaled and targets are reassigned for the afternoon round. The four highest scoring archers are placed on number 1 target, the next four highest scores on number 2 target, etc. Thus each



archer finds that he is shooting with archers whose ability is comparable to his own in the afternoon round. An added incentive in target competition is the target award. At the conclusion of the afternoon round the score is computed and added to that of the morning round. The highest scoring archer on each target wins the target award. You may be shooting on the last target in the line, but there is competition on your target for that award. On the target line you meet members of the visiting clubs and make friendships which last over the years. During the progress of a target tournament the individual is never without information as to how the other archers are shooting. Word passes up and down the line on the standing at the moment of the archers on number 1 target and if there are class awards these archers automatically find themselves assigned to the same target or adjoining targets in the afternoon round. A target archer knows whether he is leading or trailing the field in his class at any time during the afternoon round. The group fellowship enjoyed by target archers is not possible on the field course during the shoot.

The enjoyment of group shooting enjoyed by the target archers is unfortunately unattainable in shooting the regulation field roving round. Bowmen have accepted the restrictions but deplore the lack of opportunity to enjoy the companionship and fellowship that group shooting permits.

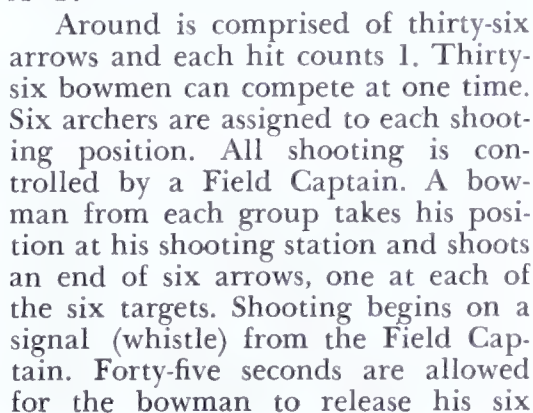
Field archery is based on shooting at unknown distances. If we keep this principle in mind and can combine it with group shooting we add immeasurably to the enjoyment of our favorite sport. The Pope-Young Round fulfills both of these requirements. To the bowman it offers a round somewhat similar to skeet which is enjoyed by many shotgun enthusiasts. The illustration and the

accompanying text will demonstrate that no two shots are taken from the same position or distance, which makes it a round that is even more tricky than the field roving round and the round is shot under conditions which permit each individual contestant to mingle with and observe the entire group of field shooters in action. A spectators gallery can be provided at a safe location to the rear of the shooting line and beverage and refreshments can be made available to both participants and spectators during the shoot.

A rectangular area approximately 100 yds. by 130 yards is required for the course. This must be open terrain so that there is clear visibility of the entire layout from any point on the range. The terrain need not be flat. Indeed a slightly rolling terrain makes the layout attractive to the field shooter. However from the safety angle depressions or gullies which would obstruct the view should be avoided.

There are six targets laid out on a semicircle 15 yards apart and designated A to F inclusive. Butts of straw similar to those used on the regular course may be used and would probably be cheaper than the target archers 4-foot circular boss. The 24 inch diameter field target faces are used and are placed at elevations from 1 foot to 4 feet above ground level. No two target faces are placed at the same elevation. The standard layout shown here may need to be varied to fit the local conditions of the terrain. Since all targets and all shooting positions are in use simultaneously precautions must be taken so that bowmen shooting from the number 1 position will be clear of the firing zone from the number 6 position to target A.

To lay out the course, first establish the position of Target A relative to the boundaries of the field. The distances to target A from the boundaries of the field may vary from those shown in the illustration. They



arrows. The Field Captain signals the end of the forty-five second period and all shooting must stop immediately. The bowman who has shot his end of arrows steps back from the shooting position and the other members of the group follow the same procedure in turn and discharge their arrows at the targets.

When the groups have finished shooting from one position the field captain signals and all the participants go to the targets to retrieve their arrows and record their scores. Score sheets should be made in advance. Thirty-six spaces are required. A hit made on target B from shooting position number 4 is recorded as B4. A hit on target E from shooting position number 2 would be scored E2. If you blank a target enter a 0 in the appropriate place on your score card. Scores kept in this manner permit an interesting comparison with the scores of other bowmen, regardless of the total score which may be accumulated during the course of the round.

Scores recorded the groups of bowmen return to the shooting line. The group which has just finished shooting from the number 6 position moves to the number 1 position. The group which was on number 1 moves

to the number 2 position, etc. This procedure is repeated after each end until each group has shot an end of arrows from each of the 6 shooting positions.

It is a tricky course and one every bowman will enjoy. You are not shooting down an alley and you really are shooting at unknown distances. Every target face is identical in size and you get no second chance to correct an error. You misjudge the distance and you have had it. On the standard field roving course four arrows are frequently shot from the same position and any sight shooter can use his first arrow as a ranging shot. If he has guessed the range he is in the money. If not he can accurately adjust his sight for the necessary elevation to place the remaining arrows in the target. You may have your own way of estimating elevation on the standard field course but you will have difficulty in adapting it to the course described in this article. This course provides plenty of competition, the friendly atmosphere where any group of bowmen meet to enjoy their favorite sport, and comes pretty close to simulating the one and only shot you are likely to get at a piece of game in the hunting season.

Protection for Nature's Kids—and Humans

Any time now a person in outdoor Pennsylvania may come upon a wobbly-legged fawn, a tiny rabbit on his first little trip away from mother, or a nest of game bird eggs. Cute or interesting yes, but the law says, "Don't touch or take"—and for good reasons.

Nature provides all her offspring with a defense, and some of the most cowardly show surprising ferocity when alarmed. An example is the cottontail rabbit. It will inflict a nasty bite wound when cornered, as some box trappers will attest.

Therefore, wildlife authorities warn: The law that says, "Leave wild birds and animals and eggs where you find them," is a good one to observe—for the safety of humans and the welfare of wildlife.

If the mother of wild young is known to be dead, or if a clutch of game bird eggs will fail to incubate because the hen has been killed, this is the course to take: Call the nearest Game Protector or Game Commission office. Doing this the (at least assumed) abandoned wildlife and the reporting person will be protected—in all ways.

BOOK NOTES



Palmer's Fieldbook of Mammals

by Dr. E. Laurence Palmer

321 pages. Illustrated with many thumbnail sketches. Published by E. P. Dutton & Company, 300 Fourth Avenue, New York 10, New York; 1957. Price \$3.75.

The author writes, "Unlike most other books on mammals, this fieldbook devotes approximately one-third of its space to a consideration of mammals that are domesticated or semi-domesticated. This is done in the conviction that more persons learn about the food habits, locomotion, reproductive behavior, and economic importance of mammals through observing domesticated ones than through observing those that are wild. The information that the average person needs about his dog, horse, or pig is not to be found in the average mammal book, and the knowledge needed about mice in the attic, squirrels in the trees, bats in the air, and muskrats in the brook is not to be found in books on domestic mammals. It is one of the purposes of this volume to help the average person in both areas."

Wildlife Law Enforcement

by William F. Sigler

318 pages. Illustrated with several black and white photographs. Published by the William C. Brown Company, Dubuque, Iowa; 1956. Price \$4.50.

For some time there has been a growing awareness of the need for greater emphasis on law enforcement in the training of general wildlife management students. Slowly, but

surely, the various State game departments have indicated a willingness to augment their law enforcement staffs by employing college graduates with specific or incidental training for this purpose.

At the same time there was a parallel problem of convincing a sufficient number of the colleges and universities offering wildlife management as a major course of study that there was a need for giving students training in theoretical and practical aspects of law enforcement. One such course was developed and initiated at Utah State Agricultural College where the author heads the Department of Wildlife Management.

The text covers every conceivable phase of law enforcement training, and the legal aspects, considerations, and techniques involved in this field. It should be of interest to all persons presently working in the wildlife field, as well as to college students and their teachers.

Cottontail Rabbit

by Elizabeth and Charles Schwartz

46 pages. Illustrated with many sketches by Charles Schwartz. Published by Holiday House, 8 West 13th Street, New York 11, New York; 1957. Price \$2.50.

COTTONTAIL RABBIT is a book for youngsters. The concise and informative text plus the accompanying illustrations will be sure to provide interesting moments for all young readers who are interested in the out of doors.

Well known in the wildlife profession, both Charles and Elizabeth Schwartz are staff biologists with the Missouri Conservation Commission. Their film, "Cottontail" was made for the Missouri Commission, and was selected by the U. S. Department of State as an entry in the 1956 International Film Festival held in Italy.

Of Men and Marshes

by Paul L. Errington

150 ix pages. Illustrated with 22 thumbnail sketches by H. Albert Hochbaum. Published by the Macmillan Company, 60 Fifth Avenue, New York 11, New York; 1957. Price \$4.50.

Perfectly blended in "Of Men And Marshes" are the knowledge, memories, impressions and observations of a man who has been keenly interested in the animal life of marshes and other wetlands since early boyhood. The response of animals to each other, their response to sometimes sudden environmental changes, and the pattern of life in marshes during the seasons of the year are described in a warm and understanding manner.

"Of Men And Marshes" is an eloquent plea for better understanding of the role of marshes in our human environment. It would be most difficult to read this excellent book without responding to the author's deep feeling for wetlands and their inhabitants.

Ford Treasury of Station Wagon Living

by Franklin M. Reck and
William Moss

256 pages. Profusely illustrated with color photographs, sketches, and diagrams. Published by Simon & Schuster, Inc., 630 Fifth Avenue, New York 20, New York; 1957. Price \$2.95.

This excellent and well illustrated book is a guide to outdoor recreation, with a directory of more than 1,300 campgrounds and field test reports on 140 items of camp gear. Many of the items presented were developed in conjunction with activities of

"Ford Times," a publication of the Ford Motor Company.

Just the right size to fit in an automobile glove compartment, this book should be of interest to all campers—station wagon owners or other model, Ford or otherwise. It reports on many indispensable items of camping gear, and provides many excellent suggestions relating to compact, portable, light-weight equipment that will immeasurably improve camping trips, ranging all the way from trips of short duration, long drives with overnight stops, and set ups for indefinite stays at one site.

Hunting Our Medium Size Game

by Clyde Ormond

219 pages. Illustrated with black and white photographs. Published by The Stackpole Company, Telegraph Press Building, Harrisburg, Pennsylvania; 1958. Price \$5.00.

This volume is a companion piece to an earlier Ormond book, "Hunting Our Biggest Game." As the publisher puts it, "This volume picks up where the first ends.

"Aside from being a great arm-chair adventure it includes how-to information of the highest order. Dealt with are the following species: whitetails and mule deer, black bear, antelope, coyotes, bobcats and cougar; along with sections on equipment, use of rifles, and care of venison."

Although the author's experiences are predominantly western, several of the animals covered are found in the East. Many of the tips on how to hunt various species of game, equipment needed, and the discussions on the use of rifles, shotguns, bows, handguns on game should be of interest to hunters in all parts of the country.

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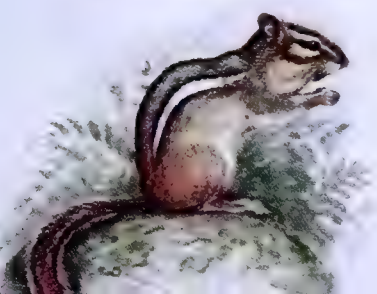
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**Pennsylvania Game Commission
Harrisburg, Pennsylvania**

PENNSYLVANIA GAME NEWS

AUGUST, 1958

TEN CENTS





THE STORY BEHIND THE COVER

PENNSYLVANIA'S most popular animal might well be the squirrel. In one form or another he is seen in every corner of the Commonwealth, from mountain-top to river valley, from farm woodlot to forest wilderness, from city park to summer cottage. Even the grade school child probably could make a good score in identifying the various kinds of squirrels shown on this month's cover. But just in case there may be a few questions, here are the answers.

The red squirrel in the upper left is like that proverbial little girl—when it is good, it is very good but when it is bad, it is horrid. This sassy member of the squirrel family joins the rest in being a good tree planter but also is fond of raiding song bird nests, probably destroying more birds in a summer than the worst house cat. It also wreaks havoc at times when it gets into summer cottages or town houses.

The flying squirrel (top right) on the other hand has few, if any, bad habits. It is the most interesting of the squirrels—the only animal, in fact, that is capable of making long flights. Folds of skin between the legs enable it to glide over 100 feet. This is America's most nocturnal animal and most people have never seen it in the wild simply because it stays hidden all day.

Everyone recognizes the gray squirrel (top center), however. This well-liked member of the family is common everywhere. Famed for its habit of burying acorns and nuts, the gray squirrel is one of Pennsylvania's most popular game animals. Early settlers found it an elusive target and "bushytail" no doubt contributed unwittingly to their world renowned skill as marksmen.

Not as well known are the western fox squirrel (middle left), Bang's fox squirrel (middle right) and Northeastern fox squirrel (bottom right). These squirrels are found in the southcentral and western counties of the state but they are comparatively rare. Largest member of the family, they feed largely on acorns and prefer more open woods or forest edges.

Smallest member of the squirrel family is the chipmunk (lower left). This interesting little rodent is a hermit by nature and leads a solitary life except during the breeding season in spring and fall. He is a great collector of plant and animal materials, hibernates most of the winter, and tames quite easily much to the delight of children.

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PENNSYLVANIA GAME NEWS

Will JohnsEditor
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AUGUST, 1958
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Editorial . . .

Wildlife Research Pays Off

Some years ago a leading industrialist remarked that less than 5 per cent of his company's research paid off. "But," he hastened to add, "It's that 5 per cent that keeps us in business." There's scarcely an activity that can't be streamlined, made more economical and effective, or even replaced with something better, through research.

This can well apply to wildlife resources, says Dr. J. P. Linduska, Director of Wildlife Management, Remington Arms Company, Inc. He explains that "Wildlife research is a newcomer . . . still grappling for a handhold on the high wall of ignorance and prejudice that surrounds resource management. But progress is evident and already it's paying off to the advantage of sportsmen.

"Take the matter of hunting regulations, for instance. Until recent years all manner of consideration went into the setting of season lengths and bag limits. But little, if any, of this guiding information was based on the biology of the critters involved . . . what was necessary for the 'hunted' and best for the sportsmen.

"Research on big game, deer in particular, has been especially productive of information leading to a businesslike job of management," said Linduska. "Today, many states are cropping twice the number of deer they did ten year ago, and everyone's benefiting—including the deer populations.

"Deer are browsers . . . they feed on the tender woody growth of low shrubs and young trees. In mature forests such plants are absent or in short supply . . . In our primitive woodlands of 100 to 200 years ago deer were by no odds plentiful in these dark forest tracts. The era of logging appeared . . . and when the bare ground revegetated it was deer range. The animals didn't just increase. They exploded. The deer reproduced faster than did their food plants. They ate more browse each year than was being produced, and then they starved each winter . . . Foresters yelled because young timber stands were being ruined by ravenous herds. The sick woodlands silted and warmed trout streams, and fishermen screamed.

"As might be expected, herd reduction and ultimate improvement of the range, reflects itself in improvement in the welfare of the animals. In favorable areas deer will average 20 to 30 pounds more in weight than animals on short provisions on abused range. Bucks . . . in areas of adequate feed will have four to six antler points at 18 months of age. Starve them on poor range and you've got spike bucks at best . . . With dense populations on beat-up range, does often fail to bear young. Yet on good food areas, with heavy cropping of the herd, twins and even triplets are common.

"All in all, it appears that we have everything to gain, nothing to lose, by cropping deer as closely as is required to maintain healthy range and healthy herds."





WALKIN' SHOES

By NED SMITH

Meet the Heron Tribe

By Ned Smith

1. One of our herons is known by the local name of "Quock," in allusion to his cry. What is this bird's proper name?
2. Cranes are frequently seen along our streams. True or false?
3. What heron sometimes seen in our state was nearly exterminated because of feminine fashions?
4. Bitterns catch fish by pursuing them under water? True or false?
5. Where do herons build their nests?
6. What bird is called the "thunder-pumper"?
7. What is the smallest heron?
8. What is our largest heron?

WHEN someone reports seeing a "crane" in Pennsylvania it's a safe bet he has seen one of the heron tribe, either a true heron or a bittern. Cranes are not found in our state, and how our native marsh birds came to be known by that name is as much a mystery as the reason behind a South Carolinian calling a largemouth bass a "trout".

Generally speaking, all herons share certain characteristics. The legs are long and slender, designed for wading. The neck is rather long, frequently assuming a graceful curve.

The bill is long, stout, and straight. In flight the neck is doubled back and the head carried between the shoulders.

True herons of various species can be found on all sorts of shallow waters ranging from tiny ponds to the largest lakes and rivers. They habitually resort to trees for perching, roosting, and nesting. Gregarious in nature, they nest in colonies that sometimes contain hundreds of nests. Filthy beyond belief and throbbing with the din of clamoring young and complaining parents the rookeries of some species are the slums of the bird world. Add poorly constructed nests and high infant mortality from a variety of causes and you have a condition seldom found in nature. The wonder is that this sort of environment could possibly produce such elegant birds.

Bitterns are the secretive members of the heron tribe, living in the densest marshes where they are rarely seen by man. Except for mating they seldom seek the company of others of their kind. They nest on the ground, seldom taking to the trees for any purpose.

A heron or bittern believes that

all things come to him who waits, and his patience is inexhaustible. Little fishes and wise old frogs scurry for cover when he alights in their front yard, but he knows they'll return when they feel the coast is clear. It might take five minutes or it might take twenty before they forget about him and move back into the shallows, but the bird won't move a feather until they do. Then, like an arrow leaping from the bow, the pointed bill knifes into the water and comes up claspng a squirming minnow. Human anglers are forever preaching patience, but these birds really practice it.

September is an excellent time to look for herons and bitterns. By that time a few species that nest in the South have drifted up into Pennsylvania to join our local birds. Here are the seven species you might find:

Great Blue Heron—Whether standing over his reflection in some glassy lake, stalking sedately through the shallows, or winging majestically overhead the great blue is the personification of dignity. He's our largest heron, standing about three feet in height.

The great blue derives his name from the bluish gray color of his

wings and back. His neck is brownish gray, streaked in front with black, white, and buffy. The head is white. A black streak beginning behind the eye terminates in a graceful crest of black feathers. The bend of the wing is chestnut brown and the shoulders are black. The underside of the body is black streaked with white.

The great blue often stalks his prey, moving so slowly through the water that scarcely a ripple precedes him. Most of his fishing, though, is done by standing motionless in a promising spot. These birds sometimes adopt the un-heronlike practice of haunting meadows in search of grasshoppers, meadow mice, and the like.

Green Heron—This little heron frequently looks more blue than green. Even when close at hand the glossy green wing coverts show a wash of blue, and the entire back is pale bluish-gray. A shaggy green-black crest adorns his head. The sides of the head and neck are chestnut brown, the front of the neck white streaked with black. The wing coverts are edged with buffy.

The green heron favors intimate woodland ponds and streams. In such places it is often flushed un-





**GREAT BLUE
HERON**



GREEN HERON



**AMERICAN
BITTERN**



**LEAST
BITTERN**

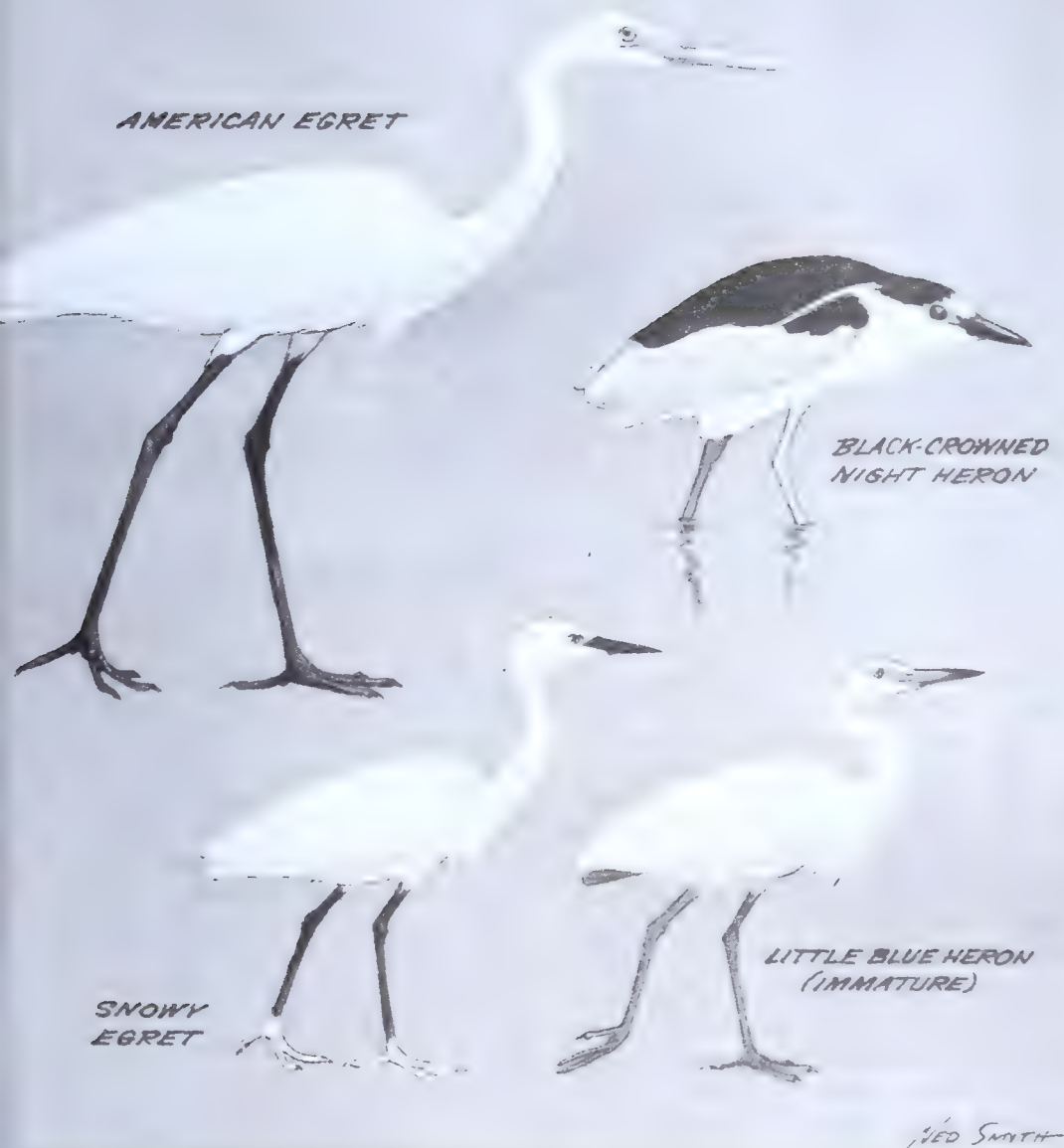
expectedly, taking to the air with an explosive *skeow!*

The "shite-poke" is quite a tree dweller, resting in the branches for hours at a time and resorting to an elevated perch when disturbed at his feeding. His appearance is little short of ludicrous as he walks along a limb, striding with true heron dignity on ridiculously big feet. Invariably, his stubby tail jerks uncontrollably, marring an otherwise flawless display of avian grandeur.

American Egret—Two white herons appear regularly in the state in

late summer following their nesting season in the South. One, the American egret, is a large snowy white bird with a bright yellow bill and black legs and feet. The other is the immature little blue heron, which will be described later. Another similar bird that appears only rarely in Pennsylvania is the snowy egret, a pure white bird that is noticeably smaller than the American. It's bill and legs are black, its feet yellow.

At the turn of the century American egrets had been reduced to virtual extinction by the relentless



demands of the millinery trade for their plumes. The nesting season was particularly favored by the plume hunters, as the adults were then loathe to abandon their young and would repeatedly return to the scene of the slaughter until they too were shot. Fortunately, the enactment of protecting laws and the enforcement work of the Audubon Society were effected in time to save the few remaining birds. As a result they once again became plentiful throughout most of their former range, and we in Pennsylvania can look forward to

enjoying their beauty each summer on our own waters.

Little Blue Heron—The small white heron frequently seen in Pennsylvania is the little blue heron in its immature plumage. Aside from its size it can be distinguished from the American egret by the dusky markings on the tips of its primaries and by its greenish yellow or olive legs and feet and dull olive bill. This bird apparently does not nest here. For some reason adults seldom venture into our state, but the

younger white birds are frequently seen.

In perfect plumage the adults are dark slate-blue except for their heads and necks, which are purplish-chestnut. Feet and legs are black, bill bluish black.

Black-crowned Night Heron—This immaculate fellow is stockier in build than most herons. His crown and back are glossy black, his wings and tail gray. The rest of the plumage is pure white. His stout bill is black and his eyes are ruby red. Several slender white plumes spring from the sides of his head.

The night heron is most active during the hours of dusk and darkness, but is oftentimes seen feeding during the day. It usually hunts on the move, striding about the shallows and frequently making a short dash to capture a fish or frog.

Its call is quite distinctive—a loud *Quock* usually uttered in flight.

These birds nest in immense flocks and their rookeries are the dirtiest and noisiest imaginable. The young are quite addicted to climbing, and frequently leave the nest to clamber among the branches, using wings and bills as well as feet.

American Bittern—This shy denizen of the marshes is probably better known by sound than by sight. The male expresses his emotions in an extraordinary "song", variously described as sounding like someone driving a stake or pumping water. His numerous nicknames allude to this unmusical effort—"bog-pumper", "stakedriver", "thunder-pumper", and "plum-puddin'" to mention a few. If the contortions that accompany the song are any indication, it is a most difficult aria to render.

The bird itself is more compactly built than most herons. Its underparts are brown, beautifully mottled and streaked with black. The throat and upper breast are whitish, the rest of the underparts are buffy streaked with brown. The throat is bordered by a black stripe.

At the approach of danger bitterns have the unique habit of pointing their bills skyward and remaining absolutely motionless. The streaking of their underparts matches their cat-tail environment so perfectly that only the sharpest eyes will discover them. Even small nestlings instinctively employ this ruse.

Least Bittern—This bird, the smallest of the heron tribe, measures but thirteen inches from the tip of its long bill to the end of its stubby tail. It is known in Pennsylvania by few but the most avid bird watchers, partly because of its retiring nature and partly because it does not occur in any great abundance.

It can easily be distinguished from the American bittern by its size—less than half that of its larger cousin. Its crown, back and tail are glossy black, the back of the neck reddish brown. The fore part of the wing is buffy, shading to reddish brown. The underparts are buffy lightly streaked with darker. A band of black marks the breast along the front edge of the wings.

Like its larger relative, the least bittern hides by looking like just another cat-tail clump. The trick is a good one—made doubly effective by the small dimensions of the trickster.

ANSWERS TO THE QUESTIONS

1. Black-crowned night heron.
2. False. Herons are usually the birds incorrectly called "cranes".
3. The American egret.
4. False. They either stalk them in the shallows or stand motionless until a fish comes within striking distance.
5. Usually in bushes or trees.
6. The American bittern.
7. The least bittern.
8. The great blue heron.

Training For Statewide Hunter Safety

By Jim Varner



IT WAS my good fortune during the week of June 14th to visit the Pennsylvania Game Commission's training school a few miles west of the friendly little village of Brockway on Routes 219 and 28 in Snyder township, Jefferson County.

Perched out there astride the eastern continental divide nearly two thousand feet above sea level is an extensive plateau whose streams carry water west into the Ohio and Mississippi basin as well as east to the Atlantic. This unique school, known as the Ross Leffler School of Conservation, is located on State Game Lands 54 which covers over 21,000 acres of Elk and Jefferson Counties. These lands are bordered on the north by the Allegheny National Forest with the picturesque Clarion River forming the boundary between them. All of this area is rich in Indian lore and pioneer history.

This well appointed school, nestled in the heart of over five thousand acres of second growth forest, mostly hardwood, really intrigued me. I only wish more sportsmen would visit this game land to see and understand just how much the present staff of the Game Commission is looking toward

the future and planning for safer and better recreation.

My objective on this trip was to observe the progress of two classes of Game Commission officers. For the first time in history, these men were "going to school" to take special training as firearms safety and rifle marksmanship instructors. You may think it strange that these game protectors had to attend such a school. They all know how to shoot and many are excellent marksmen. All of them were fully aware of the need for safety with all types of firearms.

Actually, staff members attached to the Commission's Field Division Headquarters and the District Game Protectors were here to qualify as instructors in the National Rifle Association's Hunter Safety and Rifle Marksmanship courses. Each 3-day class consisted of three Conservation Information Assistants and 21 District Game Protectors.

The Game Commission has stressed a safe hunting program for many years in their persistent effort to hold accidents to a minimum. With sportsmen's clubs, school administrators, youth groups and many other organizations seeking information and help,

however, the Commission decided to go a step ahead and train a number of field officers as a nucleus for a more intensified training program. With the continued and rapidly expanding source of help from the National Rifle Association's staff of certified volunteer instructors within our State, there is no reason why a greatly improved and expanded training program in hunter safety and firearms should not be possible throughout the entire Commonwealth.

These two classes at the Commission's school were given the course at no charge under the able guidance of special instructors. Stanley A. Mate, Director of Training for the National

Rifle Association, was in charge. He was assisted by Frank Trezise, of Columbus, Ohio, a field representative of the Sporting Arms and Ammunition Manufacturer's Institute. Stan presented each subject thoroughly while Frank not only assisted but actually demonstrated the proper use of all types of modern firearms, their different actions and the potency of all types of ammunition from the little .22 rimfire to the 30-06 class as well as shot charges and rifled slugs in shotguns.

This type of training on interior and exterior ballistics, incidentally, has always been my pet subject in the various firearms classes I've held, par-

PRACTICAL DEMONSTRATIONS of hunter safety instruction were conducted throughout the NRA course. Here two Pennsylvania game protectors show the safe way to cross any fence or obstacle as the class and instructors observe.



ticularly with the YMCA Rifle and Pistol Club in Scranton. I was very much interested in the way these two instructors presented the information. They didn't miss a trick. Sportsmen as a group understand so little about the different firearms and various types of ammunition that it is almost pathetic. First-hand demonstrations and visual aids serve a purpose no other medium can accomplish. Stan and Frank had the latest NRA color wall charts to display. They also used to perfection a new type prismatic projector, known as the Master Vu-Graph, which enabled them to do a superb job of visually presenting the most difficult subjects. The concise and efficient presentation by these two instructors was best indicated by the enthusiasm and interest of their students. I never witnessed more interest in any subject than was shown by these officers of our Game Commission.

The daily program ran something like this, with no time lost:

- 6:15 a.m.—First Call
- 7:00 a.m.—Breakfast
- 8:00-11:30 a.m.—Classes
- 12:15 p.m.—Lunch
- 1:15-4:45 p.m.—Classes
- 5:30 p.m.—Dinner
- 11:00 p.m.—Lights Out

Evening classes were scheduled as required. KP's reported to the kitchen thirty minutes before scheduled meal times. Every student had to do his share of KP duty and all seemed eager and ready to do their part. An efficient chef served excellent food which is certainly an important part in every man's life.

Records prove that most hunting accidents are the direct result of two main causes—a lack of knowledge or a failure to apply common sense in the use of firearms. It is generally agreed that the most logical and effective method of reducing accidents is education. The National Rifle Association for the past years has been operating a Hunter Safety Course.



James W. Varner

With this article on hunter safety, Jim Varner becomes gun columnist for GAME NEWS. His work will appear regularly and will deal with all phases of sporting firearms and ammunition—their safe handling, care and use.

Jim is well qualified to discuss any aspect of modern sporting arms. Born on a farm in southern Iowa, he started hunting at the age of nine. Despite long hours of farm work, he found time to reload rifle cartridges and shot shells. Mr. Varner joined the old 54th Iowa Infantry at the age of 18 and immediately started his career in shooting. He made the Iowa state rifle team the first year and qualified as a member of the Olympic rifle team to Stockholm, Sweden in 1912.

For the past 40 years Jim has resided in Scranton. During World War II he trained over 200 young men in the use of rifles, pistols and other guns at the Scranton YMCA. He has been a member of the National Rifle Association since 1912, is an avid gun collector and especially prizes a collection of Winchester arms dating from the Henry and 1866 models. He has traveled widely and has filmed over 90,000 feet of movies covering his adventures in hunting and fishing.



Photo by the author
LACKAWANNA COUNTY Game Protector Steve Kish receives his certificate as an NRA Hunter Safety Instructor from Stan Mate, NRA Director of Training, while Don Miller, left, Supervisor of the Ross Leffler School of Conservation, and Frank Tresize, right, field representative of the Sportsmen's Service Bureau add their congratulations.

This educational approach to the problem has been tried and tested thoroughly and it has been found to be highly successful. Complete literature, subject outlines, visual aids, and all the other training techniques are available to interested adult leaders.

Hunting safety was the subject stressed the week of June 14th at the Ross Leffler School of Conservation. Becoming an expert with the rifle, pistol or shotgun has some relationships to hunter safety. You can gain a lot of good practical "know-how" for hunting and handling different firearms from such a course but to develop into a real marksman, the novice shooter will have to join an established NRA Club and take part in its organized activities. This membership includes a subscription to the "American Rifleman", official monthly magazine of the National Rifle Association and a "must" to anyone who takes his shooting seriously. By shooting shoulder to shoulder with a group of experienced marksmen and being instructed by men who know

how, a shooter soon develops an interest in firearms ballistics, proper equipment, and the more technical aspects of this great sport. But this advanced development takes time. One can be at it all his life, like the author, and still find he has a lot to learn.

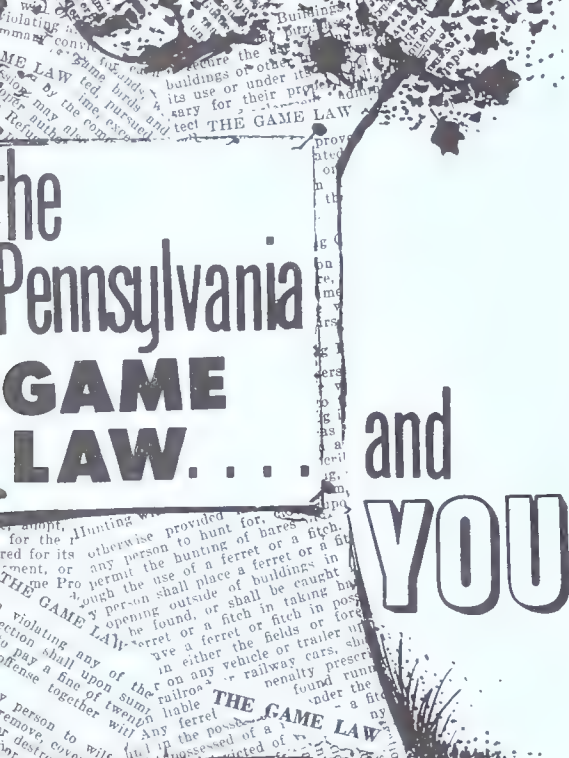
Perhaps the best summary of this unique course was given by M. J. Golden, the Commission's Executive Director, when he said: "There are numerous firearms instructors in Pennsylvania, other than Game Protectors, who are qualified to teach shooting and hunting safety. They and many sportsmen's organizations have been doing a fine job of teaching the subject to young people. The Commission's desire is to further promote safety with guns in hunting, on the range and everywhere. Our men will qualify as NRA instructors, however, in order that they may teach those who will teach the course. It will not be possible for Game Protectors and Field Division staff members to take time from their regular

duties to act as instructors of classes. By qualifying school teachers, adult leaders of various youth groups, and others as NRA instructors, many more youngsters than our men could ever reach will receive this valuable training. Commission officers will be available for such instructor training principally during the warm months, spring to fall."

CLOSE ATTENTION to all phases of the instruction characterized the "students." Game Protectors and Conservation Information Assistants were in training from 8 to 11:30 each morning and from 1:15 to 4:45 o'clock each afternoon, with several evening classes scheduled as well.



HUNTER SAFETY COURSE OUTLINE is studied by the Commission's Executive Director, J. J. Golden, as Stan Mate, right, Director of Training for the National Rifle Association and Frank Tresize, Field Representative of the Sporting Arms and Ammunition Manufacturer's Institute explain course procedure.



the Pennsylvania GAME LAW . . . and YOU

or keep them off as he chooses, because the land is his. And this is so even though the Constitution of the United States requires that the privileges and immunities which a State extends to its own people must also be accorded to the citizens of other States. Hunting isn't one of those privileges or immunities, thanks to Lord Coke's theory of long ago that all game belonged to the King. Under this concept, the people substituted for the King after they won their independence, and it is on this basis that modern game laws are written, not only in Pennsylvania but in every other State.

Usually, Pennsylvanians don't appreciate how much their hunting license means to them until they get into trouble and have it revoked.

Who can get a resident hunting license? Section 301 of the Game Law

Drop That Gun, Mister!

By John Sullivan
Deputy Attorney General

SECOND OF A SERIES

IF YOU don't have a license, you can't hunt in Pennsylvania.

That may not seem very important, when the average Pennsylvanian is free to go into the nearest sporting goods store or court house and get a license for less than the cost of a State Store fifth.

But not everyone is that lucky.

The courts have held that hunting licenses represent a very special privilege. For one thing, the people of the State legally own the game within its borders. A State could theoretically, therefore, discriminate against "outsiders" as much as it wants. If legislators wanted to go that far, they could even prohibit non-residents from hunting at all. The State is in the same position as a landowner who may permit hunters on his land

says he must have been "a bona fide resident of this Commonwealth for a period of sixty days next preceding his application, and was born in the United States of America, or was fully naturalized under the laws of the United States, or who is a citizen of the United States of America and regularly enrolled in the United States Army, the United States Navy, or the United States Marine Corps and officially stationed within the Commonwealth thirty or more days next preceding his application . . ."

How does he prove that to the skeptical issuing agent, who may be subject to penalties or loss of his agency if he issues a resident license to a non-resident? He can do it, says Section 302, by "producing a bank book, letters, lodge cards, police

cards, a motor vehicle driver's license, or some other positive means of identification, and, in the case of naturalized foreign-born applicants, the production of such applicant's naturalization papers . . ."

Sometimes the line between resident and non-resident is not too easy to draw. What about an out-of-State student attending College in Pennsylvania and living here during the school year? The answer, said at least one Pennsylvania court, is no. How about a Pennsylvania citizen and home-owner who loses his job here and goes to another State to work, moving his family and renting out his house but keeping his club, fraternal, church and other associations? Yes, in the opinion of at least one other Court, if it is established that he left the State only temporarily for business reasons and had the "animus revertendi" or intention of returning.

Free licenses are provided for resident veterans with service-incurred disability involving loss of one or more limbs or the use thereof.

Non-resident American citizens pay \$20.00 for a license as compared with

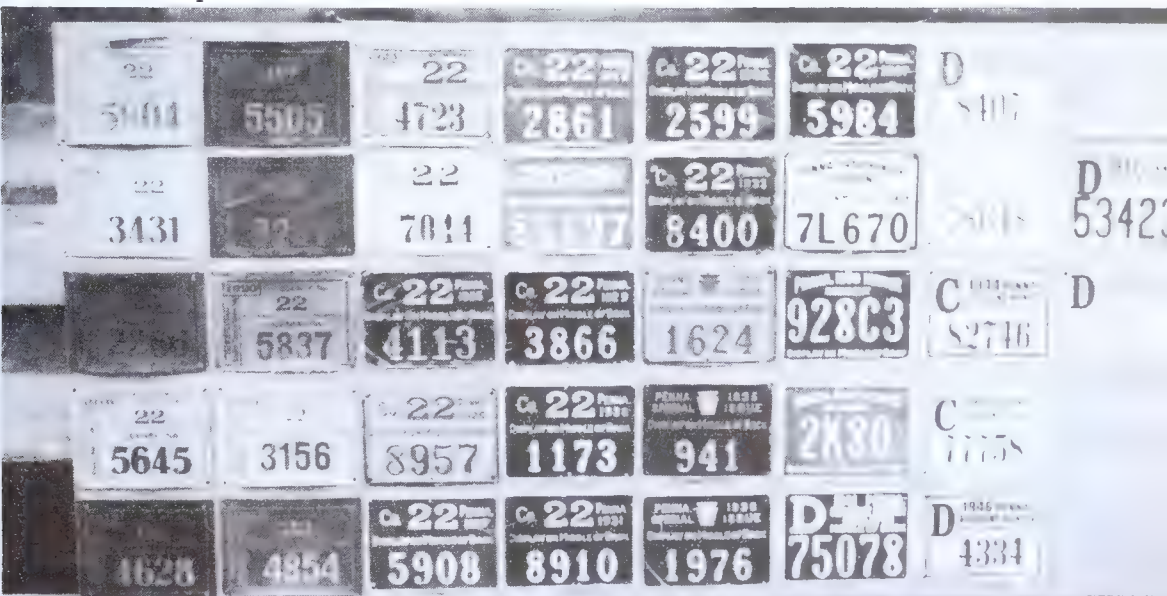
\$3.15 for the resident tag, which explains the natural desire of applicants to qualify in the lower-priced category, even to the extent of hazarding a fat fine by stretching the truth in their applications. Nonresident trapping licenses are even higher, at \$25.

The provisions concerning licenses for aliens have proved confusing to many people. Section 303 provides that "every alien nonresident of this Commonwealth who is also a nonresident of the United States" may obtain a nonresident license upon giving "satisfactory evidence of his mental and physical fitness to carry and use firearms." Note, however, that an alien who becomes a resident is prohibited under Section 1002 not only from hunting, but from owning firearms. Until the Act was amended last year he was also forbidden to own a dog.

Three-day licenses for nonresidents to hunt in regulated shooting grounds are provided at a "bargain" rate of \$3.15, the same as the annual rate for a resident license.

All licensees are required by Sec-

HUNTING LICENSES are issued by the Pennsylvania Department of Revenue through thousands of agents all over the Commonwealth. The Game Commission does not sell or otherwise issue any type of hunting license although all revenue derived from the sale of licenses is deposited in the Game Fund.



tion 306 to carry licenses on their person and to show them on demand not only to officers but also to the owner or lessee of the land hunted upon, or to his employe or representative. An officer may also demand further identification.

Lost licenses may be replaced at a cost of one dollar under Section 312 by going to the issuing agent and making a sworn statement relative to the loss.

Except where game is killed by mistake and reported, any regular salaried officer of the Game Commission is permitted under Section 314 to seize the license of anyone caught in the act of violating a game law or regulation, or who has been convicted or signed an acknowledgment of violation, or if found hunting with firearms while under the influence of liquor or narcotics. The Executive Director of the Commission may return the license if he is satisfied that the offense does not warrant a recommendation to the Commission that it revoke the license.

Revocation is a serious matter,

which is done only by formal vote of the full Game Commission at a regular meeting, after receiving and reviewing the facts of each case. It is provided for in Section 315.

The revocation authority is in two parts. In the first, it is authorized if the hunter has been convicted or has signed an acknowledgment of violation. In the second, whether or not there have been any legal proceedings, a license can be revoked after a referee's hearing for mutilating notices, damage to property, causing a forest fire, hunting under the influence of liquor or drugs, assaulting a landowner or lessee or their employe, injuring a human being with gunfire or bow and arrow, injuring self through carelessness or negligence with weapons, refusing to render assistance in a hunting or trapping accident, causing such an accident and fleeing or failing to render assistance, or violating any other safety provision of the law.

In the case of offenses under Part One—For a first offense, revocation may be up to three years; for a sec-

CHECKING HUNTING LICENSES AND BAGS indicates to the true sportsman that his sport is being protected. Hunting licenses can be revoked for causing property damage, forest fires, hunting under the influence of drugs or liquor, injuring a human being with gunfire or bow and arrow, or for many other causes.



ond, the minimum is two and the maximum three years. A third offense penalty may be "for such period as the Commission shall determine."

For offenses in Part Two, the first offense penalty is up to five years; second offense up to ten years. Revocations may be by Court action as well as by the Commission. Where personal injury is involved, hospital and medical bills must be satisfactorily adjusted before the license is restored. Any person whose license has been revoked may petition common pleas court for review within thirty days of being notified of the revocation.

Section 316 enumerates a number of unlawful acts, including: hunting or trapping without a license (except that those under 18 may trap); receiving a hunting license if under 12 years old; receiving a license if under 16 unless with written parental or guardian consent; hunting without parent or guardian or some over-21 member of the family if between 12 and 14; or without an adult over 21 if between 14 and 16, except when hunting on own premises; procuring a license under an assumed name, by false address or any false statement; lending or transferring a license or tag to another; issuing or aiding in obtaining a license for a person not entitled to a license; procuring another license after the first has been seized or hunting or trapping meanwhile; or hunting or trapping during a revocation period.

Resident farmers and their families and employees are given the right to hunt without license on their own or adjacent land (with permission) if they are actually farming and living on the premises. This is covered in Section 317.

Possession of a gun, trap or other device for taking game is prima facie evidence of hunting under Section 318 and the license must be displayed. Unless dead game is found on his person, the individual may rebut



RESIDENT FARMERS and their families may hunt without license on their own and adjacent land (with permission) if they are actually farming and living on the premises. Young sons are therefore permitted to hunt under the same conditions but it is nevertheless only good common sense that they be accompanied by some adult member of the family.

this presumption by affidavit. One defendant who claimed he was target shooting was acquitted (Commonwealth v. Davenport, 77 D. & C. 416-1952) but one who merely argued that the Commonwealth hadn't proved there was game where he was arrested was not (Commonwealth v. Spade, 64 D. & C. 121, 1949).

Penalties under the license provisions (Section 321) are \$50 for non-resident hunting without license, one dollar for failing to sign the license certificate, \$25 for other violations plus \$20 extra for hunting or trapping during revocation, or securing another license during revocation period. A further 30 day prison sentence is provided if the offense is hunting and trapping during a period of revocation for inflicting bodily injury.

Legal interpretations of the licensing sections of the Game Law have been neither numerous nor significant. One Attorney General's Opinion, dated November 9, 1922, held that the right to revoke a license does

not carry with it the right to prevent hunting where no license is required, for example, in the case of a farmer hunting on his own property. In the same connection, however, it was held in *Dietz v. Commonwealth*, 31 D. & C. 437, 1938, that farmers were not exempted from the special doe permits required by statute, since these permits were separate from regular licenses, but the law has now been changed in this respect. Another ruling, on Page 364 of the 1917-18 Opinions of the Attorney General, is of interest although outmoded by statute. It was to the effect that an alien could not escape the anti-dog law on the plea that the dog was really owned by his American-born son because he would still be in "possession" of the dog and that was also prohibited.

The only higher court opinion in this field appears to be *Commonwealth v. Cannon*, 32 Pa. Super. 78 (1906), in which the Pennsylvania

Superior Court threw out a complaint that a non-resident had hunted without a license issued by the County Treasurer. The Court pointed out that the Act permitted hunting anywhere in the State on a license issued in any county, so that it was not necessary to obtain the license in the county where the hunting took place.

Other isolated cases involving licenses included: *Game Commission v. Wargo*, 7 D. & C. 2d 25, 1956, in which the Luzerne County Court held that revocation for sale of deer was limited to sales made in close season; *Game Commission v. Craine*, 6 D. & C. 2d 129, 1957, in which the Court found factually that a hunter who had blown off his thumb with his own shotgun was not negligent enough to be deprived of his license. The requirement that a victim's medical expenses be paid by the offender was upheld in *Commonwealth v. Bixler*, 5 D. & E. 2d 369, 1957.

GAME COMMISSION OFFERS NEW AWARD FOR YOUTH ACHIEVEMENT IN CONSERVATION

Because accomplishment awards motivate youngsters to worthy endeavors, the Game Commission is offering a shoulder insignia to the boys of the state who participate in youth group activities along natural resource conservation lines. The "patch", which appropriately carries the ruffed grouse, State Bird of Pennsylvania set within a keystone border, will go to those who achieve certain goals.

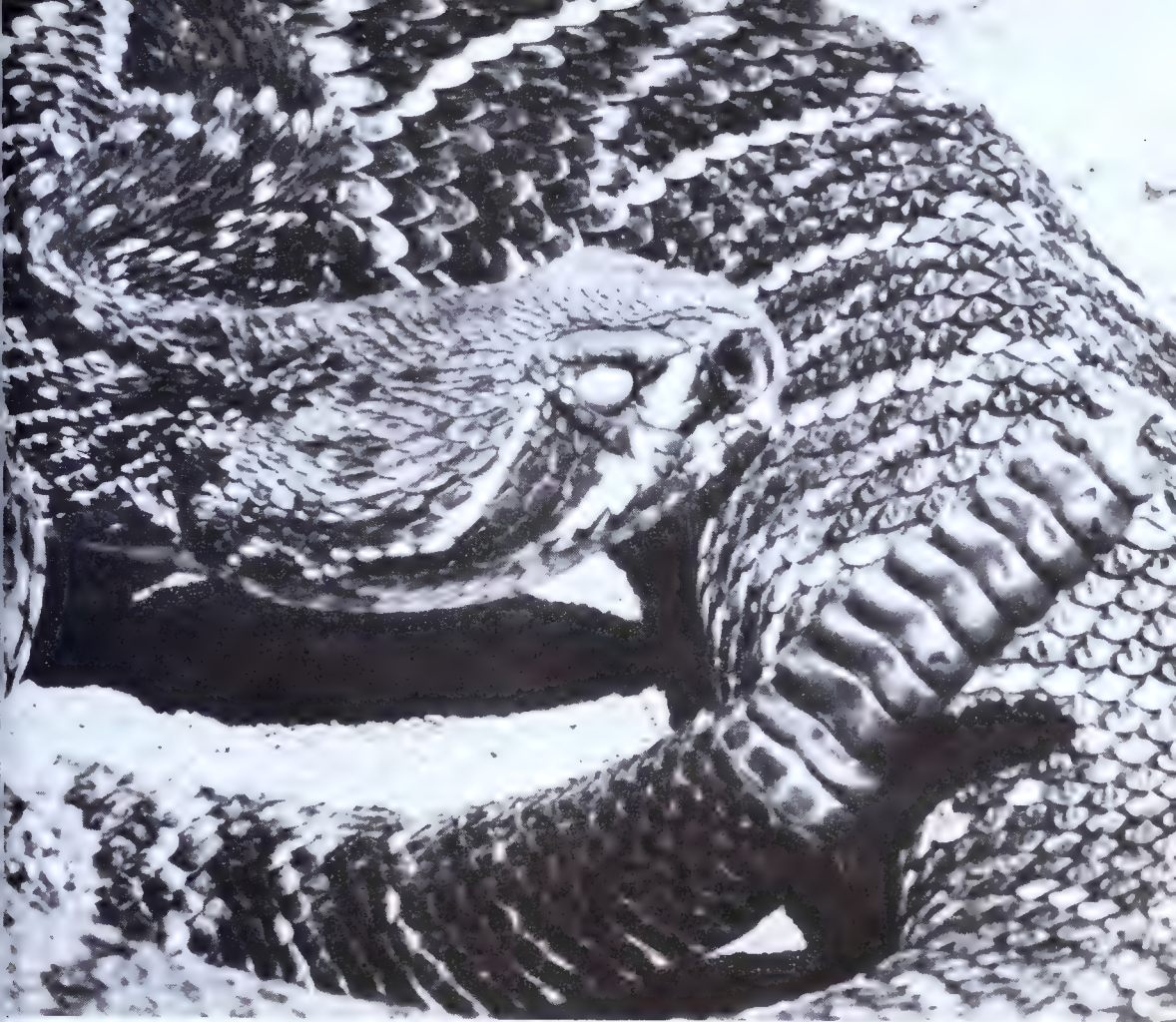
The organizations participating at this time, with their methods of selecting youngsters eligible for the award, are:

Boy Scouts: who pass the merit badge requirements in soil, water and wildlife management.

Future Farmers: who are winners in the competitive wildlife management program sponsored jointly by the Game Commission and the Department of Public Instruction.

4-H Clubs: who are winners in wildlife management project competitions.

Junior Conservation Club Members: who are selected as junior counselors at the Pennsylvania Junior Conservation Camp each summer.



Serpents and Game

By Archibald Rutledge

ESPECIALLY in discussing nature, it has always seemed to me that it is wise for a man to confine his remarks strictly to matters of his own personal observation. In taking a look, therefore, at the rather critical yet almost unexplored question of the relation of snakes to our wild game, I shall have nothing to say of mambas, cobras, constrictors, gaboon vipers, and some of those other bimboes of the serpent tribe which dwell in places that I have never visited. I shall try merely to tell what I have discovered to be the situation in America. And the situation is not so simple as it might appear at first glance; I mean that the natural ques-

tion, "Are snakes a menace to game?" cannot be answered right off the bat. The business requires a good deal of careful discriminating.

The average man—perhaps even the average woodsman—imagines that the worst places for snakes are India, Africa and South America. They have some dandies in those countries, such as the krait, the cobra and Russell's viper in India; the ringhals, the rhinoceros viper, the mamba, and python in Africa; the anaconda, the fer-de-lance, the palm viper and the bushmaster in South America. But you might wander a week in the wilds of any one of those countries without ever seeing a serpent.

Shocking and surprising as it may sound, there are no places on the globe where venomous snakes are more numerous than they are right now in the mountains of New York, Pennsylvania, and on the great coastal plain of the Carolinas and Georgia. In the Northern regions mentioned, the timber rattlesnake and the copperhead abound; at least in certain places their number is appalling, especially in the vicinity of their favorite dens, which fortunately are usually situated in wild and almost inaccessible rock cairns that no man is very likely to visit in the summer. I have known as many as 119 rattlesnakes to be killed outside one such den in a single afternoon.

In the Southern regions, to the two venomous snakes already named there must be added the great diamond-back rattler, the brutal and deadly cottonmouth moccasin, and the frail but lethal coral snake. Then in both regions there are the serpents of the non-venomous species. It seems wise to consider all of them in relation to game.

We do not really have so many game animals and birds; and it occurs to me that we might reach some definite opinion on this subject by answering the question. What game birds and animals are menaced by what snakes?

As far as my experience extends, the white-tailed deer is in no especial danger from any North American serpent. While I think it quite possible for a diamond-back to kill a deer, I have never known the thing to happen. Except in the most northerly districts of its range, the white-tail inhabits rattlesnake country. Doubtless a few does and fawns may be killed each year by this serpent. But I'll warrant that more rattlesnakes are killed by deer than deer by rattlers. An ancient feud of the wild exists between these two; and in encounters between them, which are frequent, the deer always

emerges the victor. That, at least, has been my observation.

If any deer are so killed, they must have come inadvertently on peril. In a fair fight, the business goes the deer's way. It appears, therefore, safe to say that our serpents of North America, even the worst ones, are of no especial menace to the deer.

Unfortunately, the same thing cannot be said of snakes and wild turkeys. No rattlesnake can swallow a fawn; hence the baby deer is not considered legitimate food. But a young wild turkey is a real answer to a rattler's prayer. Not long ago a mountaineer sent for me to examine a timber rattler he had killed. It measured 5 feet 7 inches, an unusual size for this species.

As the snake had evidently recently had a meal, I opened it to discover what it had caught. It had eaten a young wild turkey, about two weeks old. I do not believe that one of these serpents will strike an old turkey unless the snake is actually stepped on, nor even a young one after it has attained a size that would put it beyond the snake's power to swallow. These reptiles hunt for food; and they rarely strike unless to attain it, or for self-protection. However, from the time they are born until they are about three weeks old, wild turkeys have in the rattler, the copperhead and the moccasin real enemies.

It has been my experience that these splendid birds dislike ranging in low, thick brush; they prefer the open forest floors under big timber. Are they not thereby avoiding their arch-enemies—foxes, wildcats and snakes?

The reason why our more dangerous serpents are not more frequently seen is because they spend by far the greater part of their time in their dens, even during the summer. Most of their hunting is done during the late afternoon and throughout the night. I doubt if a rattler would ever disturb a setting wild turkey hen;



Photo by Leonard Lee Rue

FEMALE COPPERHEAD with newly born young still in sacs. This poisonous species is found in many parts of Pennsylvania but it is not a menace to either wildlife or humans, except in rare instances.

but when the young are born, he will lie beside a trail for them, or steal upon them, especially during drowsy twilight hours. And whatever is said of the rattler is true of the copperhead—depending a little on the size of the snake, for that will determine what kind of food is adapted to its use.

Whatever is true of the relation of serpents to wild turkeys is equally true of the relation of these reptiles to the ruffed grouse. There is no question at all but that young grouse fall victims to snakes, especially to the venomous ones. Likely, also, serpents destroy a great many eggs; but the chicken snake and the blacksnake are worse at this sort of thing than the pit vipers. However, on one occasion I discovered a huge diamond-back in the nest (in a hollow) of a pileated woodpecker, and the old marauder had both the mother bird and the eggs safely tucked inside him.

A great many people imagine that a venomous snake strikes rather wildly; and perhaps when tormented and infuriated, it does deliver its stroke in rather frantic fashion. But

I have kept many rattlers and copperheads for long periods in captivity; and in watching them approach their prey I have always observed that in striking they would deliberately take aim.

I have watched a rattler follow a rat around his cage for a half hour, maneuvering to get his prey in exactly the right position for the delivery of a stroke, which is usually given on the left side, immediately over the heart. I have seen a rat so struck collapse instantly, and be dead within three minutes. In striking a bird, the rattler never makes any attempt to hold on until the poison takes effect, as the cobra does. The victim would take wing and drop dead at some distance from his attacker were it not for the fact that the rattler always seems to aim for the bird's head. The snake seems to know that feathers may interfere a good deal with the delivery of the venom.

In days of swordcraft, when the chief joy in life was skewering one's acquaintances, the first thing the amateur studied was the anatomy of



Photo by Donald S. Heintzelman

TIMBER RATTLESNAKE is the largest and most dangerous snake found in Pennsylvania. Note the eye, which is characteristic of poisonous snakes. Relationships between rattlers and game are not as bad as most people believe although they do undoubtedly feed on many young rabbits and squirrels.

human beings. He must know the vital centers of life, so that he could dispatch Tom, Dick and Harry with artistic speed and finesse. It appears to me that venomous snakes know where to strike their victims, and in a sense it is merciful that they do know.

To my knowledge, there is only one species of wild duck that suffers to any extent from the attacks of serpents. Fortunately, the vast majority of these wildfowl nest north of snake country; but the beautiful wood duck nests in the South, and haunts those very backwaters and lagoons where the cottonmouth moccasin abounds. I do not think the old ducks are ever molested; and the eggs, usually well above the water, are comparatively safe. But when the young are brought to the water from the nest, they are in great danger. I have seen a cottonmouth strike one of these downy elves, and have opened other snakes of this species that have had two, and even three, young ducks in them.

It has been my experience that the woodcock suffers somewhat from the depredations of snakes; the eggs are

stolen, and occasionally the young will be destroyed. However, this fine bird is one of the very earliest nesters known, and usually the young can fly before most serpents are out of hibernation in the spring. I think that they, as well as quail, suffer most in those regions where reptiles do not hibernate, as in southern Florida.

Of all wild game, unquestionably those that are in greatest danger from venomous snakes are rabbits and squirrels. On a good many occasions I have been attracted to rattlesnakes by the chattering of squirrels; and in diamondback country, especially at night, the rather common squeal of a young rabbit has told me that a rattler has struck home. The squirrel, being arboreal, has a better chance; yet when he travels on the ground or along fallen logs, as he does practically every day, he is in danger.

Reverting now to the damage done to game by snakes, venomous and innocuous, we have to consider that, while some species of game undoubtedly suffer, these reptiles also feed on things that are perhaps worse

foes of other things, which in themselves are enemies of game. I mean rats, mice and red squirrels. This last little pest is one of the very worst destroyers of birds' eggs and of the young of birds as well; and he is a favorite prey of the rattlesnake and also of the large copperhead.

If we killed all the hawks we saw, these rodents would increase; likewise, if we killed all the snakes we saw, one of the controls of the rodents would be removed. While I always kill a venomous snake when I see one, I do so for the protection of my fellow man rather than for the protection of game. Man, with his duller senses, is really in more danger in snake country than are the children of the wild, which have ways of detecting danger and ways of avoiding it that we do not possess.

Serpents are controlled in their increase by many natural enemies, among which are deer, certain birds of prey, hogs and other snakes. The king snake especially is never so happy as when he can close with a heavy rattler, bigger than he is, and put a strangle hold on him. An artificial enemy is fire; and when one sweeps the woods, unless the snakes can retire to deep dens, thousands are destroyed. As for hogs, I have seen an old razorback wade non-

chalantly into a formidable diamond-back and chew him up unconcernedly while the great serpent was viciously striking him. The mongoose of India controls the cobra; while we do not have that interesting little champion in this country, nature has supplied us with others.

It may be that you expected me to say that I view with alarm the threat of serpents to our wild game. But a careful examination leads me to no such conclusion. In the sense that the hand of every living thing is against them, serpents lead dogs' lives; and great areas of our country formerly infested by them are now free from their presence. They kill some game; but they kill more enemies of game, and in that way they are helpful. Therefore, every time I see a serpent I am not going to yell, "Snake! Snake!" as if I had seen the devil incarnate.

If the snakes of North America have any strong desires, the strongest of these is the desire to avoid man. Only a direct attack, or what he interprets as the threat of one, will ever make one of our snakes strike. I hear that the mamba and the hamadryad will deliberately stalk a man. Thank God, we have no such reptiles in our friendly bailiwick.

Photo by Leonard Lee Rue





Big Game Hunter

BERKS COUNTY—A couple of years ago, I wrote about a high school student, Earl Ebling, of R.D., Bethel, Pa., who shot a turkey and a Canada Goose on the same day.

During the bear season, this past year, Earl had another good bag. On the first Monday, he shot a wildcat and on Wednesday, a bear.

Here is a young man who has shot just about every species of game that Pennsylvania has to offer. His trophies, and he has them, include several nice buck.—District Game Protector S. C. McFarland, Centerport.

Danger—Blasting Ahead

CHESTER COUNTY—While out patrolling on Project No. 45, checking groundhog hunters one evening I ran across a hunter who was taking no chances. On the back of his hunting jacket he had a flag—type used on construction jobs—about two foot square—red back ground and large letters “Danger—Blasting Ahead” printed on the flag.—District Game Protector P. J. Filkosky, Parkesburg.



Homes For Wildlife

BUCKS COUNTY—Ranchers, split levels, cape cods and colonials have all but replaced the hedgerows, woodlots, marshes, and hollow trees that had been wildlife nesting habitat in days of yore. This is the trend in many areas of southern Pennsylvania.

So far this spring, we have had skunks nesting under porches, raccoons under eaves, starlings between walls, pheasants and rabbits on mowed lawns, and ducks in roadside drainage ditches. Spring is the time for the new generation of wild creatures to make its appearance. And appear it will, despite the hardships and handicaps.

Many concerned individuals have answered to the call and provided safe nesting sites for some of our birdlife. Homes for woodducks, screech owls, wrens, bluebirds, martins, etc., are becoming more and more prominent. Some kind farmers are even leaving nesting cover for pheasants during their mowing operations.

Man made homes, for wildlife, have resulted in a great deal of benefit for certain species of cavity nesting birds and animals. It has been more than gratifying to record the wonderful success of our woodduck nesting boxes here in lower Bucks County.

Of the ten metal and eight wooden duck boxes, we have discovered during our periodic checks that all but three have already produced young birds and several now contain the second clutch of eggs.—District Game Protector W. J. Lockette, Doylestown.



Nearsighted

SOUTHEAST DIVISION—With all the game killed on the highway, it is quite common to see the crows and buzzards feeding on these dead animals. Seldom do you see a hawk bother with any of these dead birds or animals. The other day, to my surprise, I saw a broadwing strike a dead rabbit on a highway. After stopping the car, it was noted that the rabbit was dead for some time, and rather well dried out. After moving on I saw the hawk return for another pass. It was certainly unusual to see this bird strike nothing but a piece of dried up fur. Might be that the hawk is in the same spot I am—Needs Glasses.—Land Management Assistant, Roy W. Trexler, Reading.

Woodchuck Without Water Wings

WARREN COUNTY — During May, Jim Hill, a frequent visitor to the Tidioute area, was fishing in the Allegheny River. He noticed an animal resembling a muskrat or beaver swimming near the middle of the river. Hill approached it cautiously to see how close he could get to the animal. Much to his surprise, he discovered a woodchuck, tired and ready to welcome a much needed boat ride to shore.—District Game Protector Donald C. Parr, Tidioute.

Who's Been Eating Their Porridge?

CLINTON COUNTY—For persistence that can lead to aggravation, I have 4 bears in this area that can take the prize. Conrad Butler and Kermit Peterson, two men from near Galeton, Pa., who are cutting posts on State Forest land in Youngwoman's Creek area, can attest to that. These men are living in tents and leave the area about once a week with a load of posts. On May 25, when they returned to the tents, they found one tent completely destroyed, the stove upset, the table and all cooking utensils scattered around. The bears returned every night for a week even entering the remaining tent with the men. An electric fence was erected, but it hasn't had much effect on the bears. On the weekend of Decoration Day, while the men were away, the remaining tent was torn to shreds. Mr. Butler is a very patient man and has gotten some good bear pictures, which he figures makes up for the loss of the tents and of his sleep. Not many men would calmly try to sleep while 4 bear are doing their best to get in bed with him.—District Game Protector Charles F. Keiper, Renovo.



YOU SURE YOU'RE NOT
LOST, OL' BUDDY?



Winter's Left-overs

WAYNE COUNTY—On Saturday, May 24th, Fish Warden Harland Reynolds and myself were checking fishermen in the vicinity of Orson and Poyntelle. Much to our surprise, a snow drift approximately 200 ft. long and 100 ft. wide was observed in the area. Quite a sight with summer less than a month off. We checked our position to make sure we hadn't wandered offcourse into Alaska.—District Game Protector Frederick G. Weigelt, Honesdale.

You Auto By Deer

MONROE COUNTY—Mr. Henry Tucker, Shawnee-on-Delaware, Pa., had been feeding crippled and hungry deer at his Shawnee home all winter. This spring the deer returned to natural feed and it was no longer necessary to continue his feeding operation. Tucker owns an automobile agency in the heart of Stroudsburg. On May 30, at 6:30 a.m., two deer broke the front show window and made a tour of the agency, knocking over display racks and making quite a mess. The two deer then tried to break another window to get out, but finally found the way out through the same window by which they entered. Tucker had this to say, "They must have traveled in from Shawnee to visit. It's a good thing I didn't have a convertible in the show room; they might have driven off in it."—District Game Protector John H. Doebling, East Stroudsburg.

Wildlife of the World—Arise!

ALLEGHENY COUNTY—The time of year has rolled around again when many of mother nature's critters seem to assert their independence, to rise up in animal indignation and attempt in one form or another to do battle with these, oh so intelligent human beings. That the animal critters are successful, there is no doubt—for the humans admit being antagonized, intimidated and frustrated. They appeal to a Doctor Anthony (Game Protector) of the wildlife world who is in many instances as frustrated as they and unable to prescribe a foolproof solution. Flickers are rattling TV antennas with their airhammer bills, squirrels are gnawing through TV lead-in-wires with gusto, screech owls are divebombing humans who approach too close to the nest, rabbits are chomping tender new beans or nibbling off pine seedlings just for the heck of it, pheasants are pulling corn with a vengeance and not looking for a cutworm either (they prefer the good kernels, thanks), muskrats are making a good try at letting the water out of farm ponds, even the always perky raccoons seem to step up the tempo of spilling garbage cans. Ah spring, a wonderful time of year, sometimes frustrating—never dull.—District Game Protector Carroll Kinley, New Kensington.

"Hawk" Hunter

SULLIVAN COUNTY—While on patrol last April 20th, I had the opportunity to check a hunter who was coming out of field in Collev Township, Sullivan County. I asked the hunter, if he was having any luck, and he replied, "Not too much." He was then asked "What he was hunting" and he replied "hawks." After identifying myself and requesting to check his hunting license and car, a woodchuck was discovered lying on the floor of the back of his car. Since it is illegal to hunt game

of any kind on Sunday, I remarked, "That animal does not look at all like a hawk." He replied, "Date vat I sedt I vas hunting—Hawks." (Translation from Penna. Dutch: "That's what I said I was hunting—Hogs.") Needless to say the hunter paid a penalty of \$25.00 for the violation.—District Game Protector Paul W. Asper, Laporte.

Woodpecker Spare That Tree

BEAVER COUNTY—Over a period of years I have had all kinds of complaints from irate citizens, regarding rabbit damage, skunks under the porches, robins eating cherries, but last week I had the best of all. A local resident called and wanted information on how to keep flickers from working on his shade tree. I suggested cutting down the tree, cutting off the limb, but that was too expensive, so I finally suggested wrapping the limb with burlap sacks and painting them with pine tar. That he agreed to do as it would not cost too much.—District Game Protector J. Bradley McGregor, Beaver.

Who's On First?

CAMBRIA COUNTY—During a rainy Sunday afternoon, May 4, I received phone calls about some strange birds on Revloc Ball Field, North of Ebensburg, Route No. 422. Upon investigating I found twenty-three (23) Herring Gulls, apparently brought inland by the rain. These birds were not frightened by automobiles running on the nearby highway, but when approached, would take flight and settle in the field on the opposite side of the highway. When molested there, they would return to the ball field. I had no other reports on strange birds, but on May 15, I observed approximately the same number on Nanty-Glo Water Shed Dam about one (1) mile from Revloc Ball Field.—District Game Protector James Burns, Jr., Ebensburg.

Build A Better Bait

FAYETTE COUNTY—On May 19, 1958, I received a call from a complainant in Connellsville about rabbit damage. Mr. Earl Graham, a retired man and one of my rabbit trappers who has volunteered his service in a pinch were dispatched to contact the complainant. Mr. Graham set two box traps and advised him the luck may be poor due to the available greens at this time of year. The complainant advised Mr. Graham he might try some bananas. To this, Mr. Graham, replied, "We are not trying to catch monkeys." The complainant then said, "I have lots of canned plums." Mr. Graham had no answer for this one. The latest report is that old cotton-tail is still laughing and eating greens.—District Game Protector A. J. Ziros, Connellsville.

Birds of a Feather

MONTOUR COUNTY—During the month of May I have had the opportunity to observe some of the odd things that happen to nesting birds. A mallard hen made a nest and started to lay her clutch of eggs in the yard at my headquarters. In checking I found that not only the duck but a ringneck pheasant and a bantam hen were laying eggs in the nest also. In another part of the yard a ringneck pheasant made a nest and a bob-white quail laid a couple of eggs in with her.—District Game Protector George A. Dieffenferfer, Danville.



Goldilocks In Reverse

TIOGA COUNTY—A large male bear was killed on Sunday, May 25 by a Lawrence township farmer after it was found near his house acting in a strange manner and refusing to be driven away.

The bear was first discovered by the farmer's small daughter late Saturday afternoon when it entered the yard where she was playing. The girl, badly frightened, ran to the house summoning her mother that "A big black animal was in the yard."

Efforts by the parents to drive the bear from the premises were futile and I was notified by telephone of the occurrence at 8:30 p.m. at which time the bear was said to be in view of the caller in the light of the window just by the door step. Suggestions were given but again were in vain as the animal was still there when I was again summoned at 10:00 p.m. An examination of the grounds showed the bear had attempted to enter the barn and the house through the cellar, although nothing was destroyed, the bear was killed when it was still on the premises the next day.—District Game Protector James A. Osman, Mansfield.

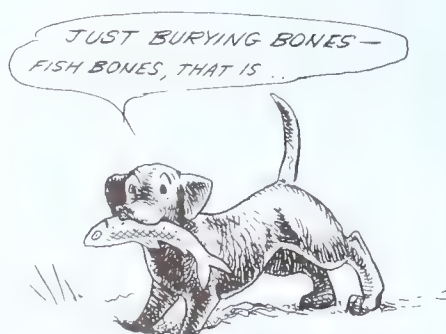
Crow Kidnapper

ELK COUNTY—On May 22, 1958, my wife and I were driving toward Ridgway when a short distance from my headquarters we noticed a young rabbit about half the size of a man's fist sitting along the highway. At this time a crow swooped down and hit the animal in the body with his bill. Momentum carried the crow past the rabbit and it made a short circle and returned. The crow grabbed the struggling rabbit and tried to fly away. The burden was a little too heavy and it went about 60 yards and then came down. I fired at it with my pistol but missed. The crow, determined to keep its prey, did not seem disturbed with my actions. It finally obtained a better hold and

just barely missed the ground and water, flew across the Clarion River where it settled down to finish its meal. I have witnessed numerous experiences of this type with hawks and owls, but never with crows.—District Game Protector Leo E. Milford, Portland Mills.

Fishing Friend

LUZERNE COUNTY—While patrolling a stream with Constable Lukavitch we checked a fisherman who told us that he had two nice trout laying in the bank. When we went to find them, they were gone. We thought that we would stay awhile because we were confused with this fisherman's story, so Luke put his rod together and commenced to fish. He landed two brown trout about a foot long and laid these fish on the bank. Later when he decided to pick up the fish, they also were gone. In the meantime the other fisherman caught two more trout and laid them upon the bank. After watching these fish for a while we caught the fisherman's dog taking the fish and running away with them. He stated that this had happened several times and he could not figure out what happened to his fish, so we told the man that maybe he could train this dog to dig his fish worms since he was such an expert fisherman.—District Game Protector Edward R. Gdosky, Oak Drive, Dallas.





WALTONIAN PINES is a 55-acre farm leased by the Berks County Chapter. It provides opportunity for League members to do conservation work as well as varied recreation including picnicking and rabbit hound field trials.

Conservation in Action - - Berks County Chapter, I. W. L. A.

By Brooke Focht

THE Berks County Chapter, Izaak Walton League of America, one of the oldest active sportsmen's clubs in eastern Pennsylvania, celebrated the 25th anniversary of its founding at a dinner April 23, at the Jolly Roger Restaurant near Reading.

Through a widely diversified program of conservation activities, the Berks County "Ikes" have built up a reputation both in Berks County and throughout the Commonwealth.

Although most of its present activities are centered around a leased 55-acre farm near Centerport, Berks County, league members have conducted a well-rounded conservation and outdoors program ever since the chapter was founded. Among various activities which have been

sponsored by the Berks chapter are a juvenile fishing rodeo, stream improvement in Berks streams, a fish nursery at Egelman's Reservoir near Reading, winter feeding of game and the raising and stocking of pheasants and quail. The Waltonians were the first group to hold field trials for pointing dogs in Berks County.

The Berks Waltonians were among the organizers of the Federated Sportsmen's Clubs of Berks County in 1936. The largest county unit in the state, the Berks federation now includes 44 clubs with more than 15,000 sportsmen enrolled.

Among the past accomplishments of the League were active assistance in the repeal of the ban on Sunday fishing in the Keystone State, advo-



CHESTNUT TREE SEEDLINGS are grown at Waltonian Pines. William Musser, Reading, woods director for the Chapter digs out one of the 3,000 seedlings assisted by Irvin E. Potts, of Kenhorst.

cating the establishment of a game refuge on the Berks County welfare farms, sparking a move to open the City of Reading's Lake Ontelaunee watershed to public fishing and the establishment of a game refuge there, and an annual sportsmen's field day which attracted state-wide interest.

Formation of the Berks Chapter is credited to Robert Parlamen, then of Reading but now employed as a Conservation Information Assistant in the Northwest Division of the Pennsylvania Game Commission at Franklin.

Parlaman conceived the idea of forming an Izaak Walton League chapter in Reading while attending a trapshoot sponsored by the Delaware County Chapter at Media. Several unsuccessful attempts were made to organize a local chapter for two years.

Finally, a charter was obtained from the national organization. Charter members include Robert Parlamen and his father, Clement, Charles R. Bersen, Willis F. Goddard, J.

Bruce Kendall, Theodore R. Wolicki, Orville I. DeWald, Ralph J. Miller, Robert J. Wennell, J. David Callaghan, John D. Rothermel, David Hassler, Nathan L. Schmeck, Miller J. Bricker, Ellis E. Brown, Philip Brown, Nathan H. Garman, Harry B. Davis, Robert Laing, Herman Wiener, Lincoln G. Ruth, F. Sterling Donaldson, Harry G. Cook and William S. Leeser.

Bersen was elected as the league's first president. Today, at the age of 75 years, he is still active in many league activities. Meetings were held at the Central YMCA for many years. Now, however, summer meetings are held at Waltonian Pines, the league's leased farm, while winter sessions convene at the Junior Fire Company social quarters.

The Berks Chapter sparked the annual Sunday live rabbit drives on the Lake Ontelaunee watershed in the days before World War II. Hundreds of county federation sportsmen would drive rabbits into a net, capture them alive and turn them loose in open hunting territory. The Berks Chapter purchased other strains of rabbits to improve the breeding stock on the watershed. The drives are no longer held because the growth of pine trees on the watershed has decimated the rabbit population by cutting down on natural food.

The Berks Chapter soon moved into state and national prominence in its field and many local members, over the years, have held both state and national offices. Oscar A. Becker of West Reading, who served as local league president in 1934 and 1936 has been a state vice president and a national director. Bersen and the late Ralph Walley served as state secretaries. State directors from Berks County have included Bersen, John D. Rothermel, Harvey Adams, Donald Shunk, Harold Marbarger and Willis Goddard. Local men who served as state presidents include the Rev. Darlington R. Kulp and John Deck.

The local chapter is the second largest of the 19 in the Pennsylvania Division, Izaak Walton League of America. Harvey Adams of Sinking Spring has what may be a record in the national organization. He has served as treasurer of the local chapter for the past 24 years. Adams also heads the farm governing board.

Izaak Walton League members were among the organizers of the Schuylkill River Valley Restoration Association, the group which is given credit for sparking the clean up of coal silt from the river.

Another contribution to the cause of establishing food and cover for wildlife in Berks County was made several years ago when the local Waltonians purchased a mechanical tree planter. This implement, which is capable of planting 10,000 trees in one day, is rented to interested persons or organizations at a nominal sum.

In April of 1953 the Berks Chapter obtained a lease on a 55-acre farm owned by Mrs. Mathilda Bassler of Leesport. This farm, dubbed Waltonian Pines, is now the focal point of many league activities.

Located in a picturesque rolling valley, the entire farm area is ringed by tall pine trees planted many years ago. There is a frame house and barn. The barn has been improved and serves as clubhouse for chapter members. Members working in their spare time have painted the barn, installed a blacktop floor at ground level for a witchen and social room, purchased and installed second-hand church pews for the upstairs meeting room, established a fish rearing pond and installed a trapshooting range.

Two years ago chapter members planted and raised 3,000 blight-free chestnut trees which just recently were sold to other Izaak Walton League chapters and interested individuals who planted them to provide food for wildlife. League members plan to plant 1,000 chestnut

trees every year. These trees will be replanted throughout the Berks area after two years' growth.

Waltonian Pines has also been planted to game food plots, multi-flora rose bushes and lespedeza to provide food and shelter. The area annually shelters many cottontail rabbits and pheasants. Field trials for rabbit hounds are held on the farm several times a year.

This year league members will dedicate a plot of 125 chestnut trees to the memory of Dr. William Bassler, whose widow leases the farm to the chapter at no cost. League members used their own tree planter to plant 30,000 pines on the farm. Many family-type functions are held at Waltonian Pines and the area is open to picnicking by members and their families at any time.

A ladies' auxiliary was formed in 1955 and has proved a very active addition to the chapter. Officers of the distaff side are: President, Mrs. Anna Musser; vice president, Mrs. Frances Adams; secretary, Mrs. Mary Jane Drobnick and treasurer, Mrs. Theresa Shunk.

Chapter officers are: President, Dr. Ralph E. Humma; vice president, Daniel F. Ancona, Jr.; secretary, Elvin Heist; corresponding secretary, George Zehner and treasurer, Harvey Adams.

Members of the board of directors include: Chairman, Donald Lacy; vice chairman, Paul Seitzinger; woods, William Musser; waters, Seitzinger; education, William Eddy; program, Frederick Crossland; publicity, Lacy; membership, Charles Shunk; wildlife, Harold Potts.



COMMISSION SETS 1958 HUNTING & TRAPPING SEASONS; ADEQUATE HARVEST AIM OF SOUND GAME MANAGEMENT PLAN

The Pennsylvania Game Commission met in Harrisburg on July 1st, as required by law, to establish the seasons and bag limits for game and furbearers during the 1958 hunting license year which begins September 1st. The Commissioners gave full consideration to proposals offered by sportsmen, farmers, foresters and its own field force and staff in reaching conclusions on seasons which would provide maximum recreational opportunity yet still insure adequate supplies of Pennsylvania wildlife for the future.

The seasons and bag limits declared followed the pattern of those in effect during the past year. There were several changes, however, and modifications of particular interest.

1. There will be a three-day antlerless deer season next December similar to the one held last year. The Commission allocated 350,700 licenses for issuance by county treasurers this year, an increase of 14,200 over last year. Despite last year's record harvest of antlered deer and heavy cropping of antlerless animals, the carry-over remained high. The Commission has received urgent requests from various sources indicating the need for further control of deer numbers. Highway accidents involving deer this winter and spring continued to pose a hazard to the motoring public. Complaints of crop and forest damage by deer were also not alleviated to any satisfactory extent by last year's harvest. But fully aware that the objective of sound game management is to provide for maximum hunting opportunity yet at the same time insure adequate breeding stock for the future, the Commission gave particular consideration to the expected net increase (fawns born minus fawn mortality and mortality of adults) in

the Pennsylvania deer herd this summer.

2. Bow and arrow hunters will enjoy a separate deer season this year of three weeks' duration, starting October 4 and closing October 24. As required by law, archers will be permitted to take any deer, regardless of size or sex. An Archery License is required during this season, issued only by County Treasurers at a fee of \$2.15 or the Department of Revenue, Harrisburg, at a fee of \$2.00. Last year a record number of 55,554 licensed archers harvested 1,358 deer during a one week season in October.

3. Hunting for all native small game will open on the same day this year—Saturday, October 25. The season will remain open for five weeks, except in the case of wild turkeys. By reverting to the traditional single opening day for small game, the Commission hopes to alleviate a growing problem of too much hunting pressure on certain areas, especially agricultural regions which adjoin the wild turkey range. The small game season will close November 29, affording hunters a traditional Thanksgiving hunt. The wild turkey season will close one-week earlier, November 22, which is just prior to the date the bear season opens.

4. An extra cottontail rabbit season will run concurrent with the snowshoe rabbit (varying hare) season—December 27, 1958 to January 3, 1959. Research studies have conclusively proved that hunters seldom, if ever, over-harvest rabbits. Many Pennsylvania sportsmen have long urged a longer season on cottontails, particularly in areas where both species of animals are found. This week-long season during the New Year's holidays will afford much hunting pleasure and healthy outdoor recreation but will not endanger either cottontail or snowshoe hare populations.

Pennsylvania Official 1958 Open Seasons and Bag Limits

(Regulations apply for Hunting License Year, September 1, 1958 to August 31, 1959)

Open season includes first and last dates listed, Sundays excepted, for game. The opening hour for small game, migratory game birds and other wild birds or animals on October 25 will be 8:00 A. M., EST. On other opening days, and otherwise during the season for upland and big game, the shooting hours daily are from 7:00 A. M. to 5:00 P. M., EST, excepting from July 1 to September 30 inclusive, 6:00 A. M. to 7:30 P. M., EST, and the hours for the October archers' deer season, which are 6:00 A. M. to 5:30 P. M., EST.

UPLAND GAME (Small game possession limits below)	BAG LIMITS		OPEN SEASONS	
	Day	Season	First Day	Last Day
Ruffed Grouse	2	8	Oct. 25	Nov. 29
Wild Turkeys	1	1	Oct. 25	Nov. 22
Squirrels, Gray, Black & Fox (combined)	6	30	Oct. 25	Nov. 29
Ring-necked Pheasants, males only	2	8	Oct. 25	Nov. 29
Rabbits, Cottontail	4	20	Oct. 25	Nov. 29 and
Rabbits, Cottontail ..(not more than 20 in combined seasons)			Dec. 27	Jan. 3, 1959
Bobwhite Quail	4	12	Oct. 25	Nov. 29
Hares (Snowshoe Rabbits)	2	6	Dec. 27	Jan. 3, 1959
Raccoons (hunting or trapping)		Unlimited	Sept. 1	Aug. 31, 1959
Woodchucks (Groundhogs)		Unlimited	Sept. 1	Aug. 31, 1959
Grackles		Unlimited	Sept. 1	Aug. 31, 1959
Squirrels, Red (closed October 1 to 24, incl.)		Unlimited	All mos. (exc. Oct. 1-24)	
Bears, over one year old, by individual	1	1	Nov. 24	Nov. 29
Bears, as above, by hunting party of three or more	2	2	Nov. 24	Nov. 29

DEER:	Bow and Arrow Season—Either sex, regardless of size. (Requires Hunting License and Archery License, but no Antlerless Deer License)		(only one deer for combined seasons)	
	ANTLERED DEER—Regular Season—Male with two or more points to one antler: Provided, a male deer with an antler three or more inches long without points, measuring from the top of the skull as the deer is in life, shall be considered legal, by individual		1	1
	ANTLERLESS DEER SEASON—(Requires Hunting License and Antlerless Deer License), by individual			
			Oct. 4	Oct. 24
			Dec. 1	Dec. 13
			Dec. 15, 16 and 17	

NO OPEN SEASON—Hungarian Partridges, Hen Pheasants, Sharp-tailed Grouse, Cub Bears, Elk, Otters.

FURBEARERS:

Skunks and Opossums	Unlimited	Sept. 1	Aug. 31, 1959
Minks	Unlimited	Nov. 22	Jan. 17, 1959
Muskrats (traps only)	Unlimited	Nov. 22	Jan. 17, 1959
Beavers (traps only) state-wide	5	Feb. 14	Mar. 21, 1959

SPECIAL REGULATIONS

POSSESSION AND TRANSPORTATION LIMITS of legally-killed small game shall mean not more than the daily limit for the first day nor more than an accumulated total for each succeeding day of the open season for each species; but not in excess of the season limit, regardless of where held, stored or found in possession.

DEER—Even though there are three separate seasons for taking deer, a hunter may not kill more than one deer during the three combined 1958 seasons, whether hunting individually or with a camp or hunting party. An Archery License is required during Bow and Arrow Season, issued only by County Treasurers at a fee of \$2.15, and the Department of Revenue, Harrisburg, at a fee of \$2.00. Antlerless Deer Licenses are issued only by County Treasurers at a fee of \$1.15, and valid only in the county for which issued. Farm occupants may hunt for deer during the Archery Season and the Special Antlerless Deer Season without a license on lands resided upon, or those immediately adjacent with the written consent of the owner or lessee. Under the law, no application for an Antlerless Deer License shall be approved, or license issued, to a nonresident prior to November 15, or after December 14, 1958.

BEAVERS—No trapping at Commission-posted dams. Nonresidents may not trap beavers. One person may set, tend or operate 10 traps only. Traps must not be set on the structure of any beaver dam or house, or within 25 feet of the waterline on the structure of either thereof. Tags must be kept above ice or waterline to facilitate identification without disturbing traps. Pelts must be tagged within 10 days after season, and may not be sold or otherwise disposed of until properly tagged. Present them to the Game Protector in District or County where trapped.

TRAPPING—Traps for furbearers not to be placed, staked or set before 7:00 A. M. on the first day of open seasons. The season indicated for Trapping closes at 12:00 o'clock Noon on last day. Traps must be tagged with metal name tags

SNARES—The use of snares is prohibited in all counties except by special permit.

GAME COMMISSION DECLARES SPECIAL OPEN SEASON TO HUNT ANTLERLESS DEER

DECEMBER 15, 16 and 17, 1958

The Pennsylvania Game Commission, by resolution adopted at its meeting on July 1, 1958, and pursuant to authority conferred upon it by law, declared an open season for the hunting, taking and killing of antlerless deer (deer without visible antlers or horns), regardless of sex, size, age, or camp limit, on December 15, 16 and 17, 1958, throughout the entire Commonwealth, except in Game Refuges or Propagation Areas (other than on any of the latter which the Commission may later specifically declare open to deer hunting) established by the Commission, during which time antlerless deer may be hunted for and taken only in the manner prescribed by the provisions of the Game Law and resolution and regulations of the Commission.

The quota of Antlerless Deer Licenses for each County, as made available by action of the Commission, is as follows:

NUMBER OF LICENSES ALLOCATED FOR ISSUANCE BY EACH INDIVIDUAL COUNTY TREASURER

County	County Seat	No. of Licenses	County	County Seat	No. of Licenses
Adams	Gettysburg	2,200	Lackawanna	Scranton	3,750
Allegheny	Pittsburgh	1,250	Lancaster	Lancaster	2,000
Armstrong	Kittanning	3,250	Lawrence	New Castle	2,000
Beaver	Beaver	1,250	Lebanon	Lebanon	3,000
Bedford	Bedford	6,300	Lehigh	Allentown	2,000
Berks	Reading	6,000	Luzerne	Wilkes-Barre	7,500
Blair	Hollidaysburg	3,400	Lycoming	Williamsport	8,000
Bradford	Towanda	7,000	McKean	Smethport	16,500
Bucks	Doylestown	3,250	Mercer	Mercer	3,000
Butler	Butler	5,000	Mifflin	Lewistown	3,200
Cambria	Ebensburg	5,000	Monroe	Stroudsburg	6,500
Cameron	Emporium	3,500	Montgomery	Norristown	2,500
Carbon	Jim Thorpe	7,000	Montour	Danville	1,250
Centre	Bellefonte	7,500	Northampton	Easton	2,500
Chester	West Chester	3,000	Northumber-		
Clarion	Clarion	4,000	land	Sunbury	3,000
Clearfield	Clearfield	6,000	Perry	New Bloomfield	5,000
Clinton	Lock Haven	4,250	Philadelphia	Philadelphia	....
Columbia	Bloomsburg	5,000	Pike	Milford	8,000
Crawford	Meadville	6,500	Potter	Coudersport	11,000
Cumberland	Carlisle	3,200	Schuylkill	Pottsville	11,000
Dauphin	Harrisburg	4,000	Snyder	Middleburg	3,000
Delaware	Media	500	Somerset	Somerset	8,750
Elk	Ridgway	15,000	Sullivan	Laporte	7,000
Erie	Erie	5,000	Susquehanna	Montrose	8,250
Fayette	Uniontown	3,000	Tioga	Wellsboro	7,500
Forest	Tionesta	15,000	Union	Lewisburg	2,750
Franklin	Chambersburg	4,400	Venango	Franklin	6,000
Fulton	McConnellsburg	3,750	Warren	Warren	15,000
Greene	Waynesburg	1,500	Washington	Washington	1,250
Huntingdon	Huntingdon	6,000	Wayne	Honesdale	8,500
Indiana	Indiana	5,250	Westmoreland	Greensburg	7,500
Jefferson	Brookville	5,500	Wyoming	Tunkhannock	5,000
Juniata	Mifflintown	2,750	York	York	3,000
TOTAL					350,700

IMPORTANT—DO NOT MAIL APPLICATION TO PENNSYLVANIA GAME COMMISSION OR DEPARTMENT OF REVENUE, HARRISBURG. Antlerless deer licenses will be available at County 'Treasurers' offices only.



COMMISSION ENROLLS NINTH STUDENT OFFICER CLASS; 25 PROSPECTIVE GAME PROTECTORS ENTER SCHOOL JULY 1

The Pennsylvania Game Commission enrolled 25 carefully selected men on July 1 as members of the Ninth Student Officer Class at the agency's Ross Leffler School of Conservation in Jefferson County.

Those chosen had successfully completed a series of examinations, thereby qualifying to receive the training the wildlife agency requires of all prospective field officers. Two hundred and forty-three (243) men whose applications were acceptable responded to the Commission's invitation to come to Harrisburg on May 10 to take the competitive written examination. Forty (40) of the examinees who attained the highest grades in the written test were invited to return to the Capitol City on June 2 and 3 to be further tested by an oral interview board. One of the 40 failed to appear, 6 did not qualify in the oral interview and 2 did not pass the rigid physical examination. Of the remaining 31 the 25 men having the highest composite grades were invited to enroll in the Class. All of them accepted. Their names and addresses are:

Jerry Jay Stager, R.D. 4, Wellsboro, Tioga County
John Leckie Altmiller, 685 North Vine St., Hazleton, Luzerne County
Joseph J. Matikiewicz, Main St., Box 2, Thompson, Susquehanna County
Edward F. Divers, 3309 Cypress St., West Mifflin, Allegheny County
Thomas P. Bougher, 819 Philadelphia Ave., Barnesboro, Cambria County
James D. Moyle, R.D. 2, Box 43, Lewistown, Mifflin County
Alfred L. Graver, R.D. 1, Box 78, Bath, Northampton County
Leo J. Badger, 306 Sims St., Ellwood City, Lawrence County
David C. Kirkland, 622 Washington St., St. Marys, Elk County
Mervin L. Warfield, 724 Mine St., Pottsville, Schuylkill County
Richard W. Ruths, 1357 Chestnut St., Kulpmont, Northumberland County
John R. Miller, Box 164, Gray, Somerset County
Eugene B. Hunt, Box 159, R.D. 1, Williamsport Rd., Monongahela, Washington Co.
Edward T. Clark, 1815 Orchard Ave., Folsom, Delaware County
Robert P. Shaffer, 124 West Penn St., Bedford, Bedford County
Michael E. Christoff, 308 Curtin St., Osceola Mills, Clearfield County
Edward F. Sherlinski, 157 Gaylord Ave., Plymouth, Luzerne County
William A. Griffie, Route 3, Gettysburg, Adams County

Earl F. Crum, R.D. 1, Duncannon, Perry County
Guy W. Waldman, R.D. 3, Williamsport, Lycoming County
Fred Junior Wecker, R.D. 1, Falls Creek, Jefferson County
George T. Szilvasi, Mounted Route 7, Ellwood City, Lawrence County
John B. Hancock, 1813 Niggel St., Pittsburgh 12, Allegheny County
John A. Badger, R.D. 1, Portersville, Butler County
Richard C. Feaster, 114 West Market St., Mt. Union, Huntingdon County

Members of the Ninth Student Officer Class come from 22 counties of the Commonwealth. Three Deputy Game Protectors were among those who attained the highest aggregate scores.

Approximately half of the 9-months course given the recruits will be spent in basic, classroom study at the Conservation School. Specialists on the

Game Commission staff, and others provided by state and national organizations and institutions of learning, will teach subjects dealing with the multiple duties of a Pennsylvania Game Protector. The Student Officers will spend the remainder of the training course, at seasonal periods, in various parts of the Commonwealth. Under the tutelage of veteran Game Protectors they will absorb valuable experience bearing on the duties of the Commission's salaried field officers.

The trainees who successfully complete the course of instruction will graduate about April 1, 1959. They will emerge as probationary officers assigned to existing vacancies and will work alongside seasoned Game Protectors in helping to conduct Pennsylvania's game management program in the field.



Photo Courtesy Bloomsburg *Morning Press*
BEST WISHES are extended to Pennsylvania Game Protector Mark L. Hagenbuch, center, by Hon. Elwood C. Huffman, president of the Pennsylvania Game Commission, at a recent testimonial banquet held in Bloomsburg. Mrs. Hagenbuch joined her husband as guest of honor. Shown with them is Game Protector Clyde Laubach, right, who served as toastmaster during the banquet.



PGC Photo by Joseph Chick

LAND MANAGEMENT WORK such as this border cutting to improve food and cover conditions for wildlife in southcentral Pennsylvania will now be administered by the Game Commission's new Land Management Officers.

GAME COMMISSION REORGANIZES FIELD FORCE; NEW SYSTEM OF LAND MANAGEMENT STARTED JUNE 1

The Game Commission realigned its field force, effective June 1, according to the plan announced in April. The adjustment was made to effect the best possible management of lands administered by the wildlife authority. It also relieves many Game Protectors of land management duties they previously performed, thus enabling them to spend more time on law enforcement, public relations and other related programs. Due to the earmarking of certain monies made available to the Game Commission such as Pittman-Robertson funds, which are definitely earmarked for research and acquisition and land development, the earmarking by law of \$1.25 of each hunter's license fee and the earmarking by law of all monies derived from the sale of antlerless deer licenses, land management and land development activities, the Game Commission is now expending approximately 38% of the total annual budget on these activities.

With the change, 22 qualified Game Protectors become Land Managers, each specifically responsible for the food and cover operations on a group of State Game Lands and other properties administered by the Commission. The Land Managers will be in full charge of the per diem corps of Commission employees who are known as the Food and Cover Corps and who work on State Game Lands and leased areas. Each manager is responsible to his Field Division Supervisor and the Land Management Assistant of the Division for all approved wildlife development work. This includes planting, timber cutting operations, care of equipment, obtaining materials needed—anything connected with their program. These officers will be responsible, also, for all wildlife development work on Farm-Game Projects. Law enforcement on the Projects will remain the duty of the District Game Protector.

Former Game Protectors who be-

came Land Managers, and their assignments, follow:

NORTHWEST DIVISION—Edward M. Borger R. D. No. 2, Polk. Retains his former headquarters and is in charge of Group Area 1, which encompasses Butler, Lawrence, Mercer and Venango Counties. Donald M. Shake, R. D. No. 1, Knox. Same headquarters, in charge of Area 2, Clarion and Jefferson Counties. William R. Overturf, Youngsville. Same headquarters, Area 3, Warren and Forest Counties. Ralph E. Flaugh, Albion. Same headquarters, Area 4, Erie and Crawford Counties.

SOUTHWEST DIVISION—J. B. McGregor. Former residence at Beaver, new headquarters Washington, in charge of Group Area 1, Beaver, Allegheny, Washington and Greene Counties, also the portion of Fayette County west of U. S. Highway 119 and the Youghioghenny River. C. L. Ruth. Former residence, Hibbs, Fayette County, new headquarters Indiana, Area 2, parts of Armstrong, Indiana, Cambria and Westmoreland Counties north of U. S. Highway 30. C. R. Kinley. Former residence New

Kensington, new headquarters Somerset, Somerset County, Area 3, parts of Somerset and Westmoreland Counties south of U. S. Highway 30, and the portion of Fayette County east of U. S. Highway 119 and the Youghioghenny River.

NORTHCENTRAL DIVISION—Robert Myers. Retains his residence at Mt. Jewett, McKean County, is in charge of Group Area 1, consisting of McKean and Cameron Counties and the western part of Potter County. James A. Osman. Retains headquarters at Mansfield, Area 2, the eastern part of Potter County and the counties of Tioga, Lycoming and Union. Robert H. Sphar. Former residence R. D. No. 1, Philipsburg, new headquarters the Commission-owned house on State Game Lands No. 25, Elk County, Area 3, Elk and Clearfield Counties. Sam B. Reed. Retains his headquarters at Pine Grove Mills, is in charge of Area 4, Clinton and Centre Counties.

SOUTHCENTRAL DIVISION—Roland F. Turley. Retains headquarters at Martinsburg, Area 1, Blair and Huntingdon Counties and the

STATE GAME LANDS will be managed under the new system for improved development work. Land Managers will supervise planting, timber cutting operations, use and care of equipment, and obtain necessary materials to carry on the Commission's major program.



northern part of Franklin County. Nicholas M. Ruha. Retains headquarters at Everett, Area 2, Bedford and Fulton Counties and the western part of Franklin County. Raymond E. Holtzapple. Retains headquarters at R. D. No. 3, Middleburg, Area 3, Snyder, Mifflin, Juniata, Perry, Cumberland and Adams Counties, and a small section of eastern Franklin County.

NORTHEAST DIVISION—George E. Sprankle. Former residence R. D., Canton, new headquarters Dushore, Sullivan County, Area 1, Bradford and Sullivan Counties, the southwestern section of Wyoming County and State Game Lands No. 57, Luzerne County. Albert J. Kriefski. Former residence Blooming Grove, new headquarters Honesdale, Area 2, Susquehanna, Wayne and Pike Counties, and the northern part of Lackawanna and the northeastern portion of Wyoming County. William E. Fulmer. Former residence Lehigh, new headquarters Bloomsburg, Columbia County, Area 3, Northumberland, Montour and Columbia Counties, and the western portion of Luzerne County. Duane E. Lettie. Retains his headquarters at Weatherly, Area 4, Monroe and Carbon Counties and the southern portion of Lackawanna and the eastern section of Luzerne Counties.

SOUTHEAST DIVISION—Ralph L. Shank. Retains headquarters at Pine Grove, in charge of Group Area 1, Schuylkill County and the northern part of Lebanon and Dauphin Counties. Stephen C. Mace. Former residence Manchester, new headquarters Mt. Gretna, Lebanon County, Area 2, Lancaster and York Counties, and the southern portions of Lebanon and Dauphin Counties. Samuel C. McFarland. Retains residence at Centerport, Area 3, Berks, Chester and Montgomery Counties. Edwin W. Flexer. Retains residence at Quaker-

town, Area 4, Bucks, Lehigh and Northampton Counties.

Law enforcement, public relations and other phases of the work formerly administered by officers assigned as Land Managers will be serviced by Game Protectors in adjoining districts or by experienced Deputy Game Protectors. Men of the Ninth Student Officer Class who graduate next spring from the Commission's Ross Leffler School of Conservation will fill vacancies in the field.

Wildlife Conservation to Be Featured at Exposition in Hershey This Month

Wildlife conservation, including farmer-sportsmen cooperation, will be featured at the 16th National Plowing Contest and Conservation Exposition August 21 and 22 in conjunction with Pennsylvania Dutch Days at Hershey, near Harrisburg.

Both the Pennsylvania Fish and Game Commission will sponsor exhibits and field demonstrations at the event.

Each exhibit and demonstration will emphasize the importance of conserving the State's fish and wildlife resources, compare good and improper management methods and cite the need for farmers and sportsmen's groups to work together.

"Working Together Through Soil Conservation Districts" will be the theme of the conservation aspects of the exposition which, for the first time, is being held east of Ohio and on a single farming operation. More than 2,300 acres of the 12,000-acre Milton S. Hershey Farms will be used for the event.

Soil, water, forest, fish and wildlife conservation exhibits will be arranged in a two-acre wheel-type layout, with the displays forming spokes of the wheel. In addition, actual demonstration areas will be situated close to the plowing contest site and on the route of the free wagon trains that will transport thousands of visitors.



STATE BIRD is center of interest at the Pennsylvania Junior Conservation Camp conducted by the Federation of Sportsmen's Clubs in the University Forest near State College. Here Game Protector Mike Evancho, of Jersey Shore, points out identifying characteristics to Senior Camp Counselor Jim Holt, left, and camper Harold Royer, of Lebanon.

Seedlings Planted by Sportsmen, Scouts, Others

Seedlings released from the Howard Nursery for planting this spring on State Game Lands, Farm-Game Projects and other properties leased by the Game Commission totaled 2,495,000. With the Commission's game food and cover planting needs satisfied other organizations and agencies drew on the remaining supply.

Planted by Commission personnel or others, whether directly for game species or for soil or water conservation, the seedlings will benefit wildlife.

Approved recipients such as the Soil Conservation Service, Boy Scouts, 4-H Clubs, Future Farmers of America, and others, planted almost 3,519,000 of the seedlings this spring. The Department of Forests and Waters received 30,000 multiflora rose seedlings, and the Highway Department got 10,000 of the same.

Commission Acts to Curb Cross-Country Driving on State Game Lands

In the last few years some persons have taken special privilege by driving jeeps or other vehicles promiscuously across State Game Lands other than on the roads provided. This has been done to the detriment of the intended purpose of these lands and to the displeasure of the hunting public.

Under the authority vested in it by the Pennsylvania Game Law, the Commission has therefore declared that it shall hereafter be unlawful for any person to go upon State Game Lands in a vehicle of any description, excepting by way of the roads on such lands that are open to the public for vehicular traffic. Anyone violating this edict shall, upon conviction, be sentenced to pay the fine provided in the Game Law for such misdeed.

Commission Pays \$122,099 for Bounties Last Year

The summary of bounties the Game Commission paid on predators killed in Pennsylvania during the period June 1, 1957 to May 31, 1958 shows:

In those twelve months a total of \$122,099 was paid from the Game Fund for 9,892 valid claims. In the Commission's previous fiscal year \$124,830 was paid for 10,459 claims.

Bounties were paid, in the year ending May 31, 1958, on the following: 11,006 gray foxes (\$4 each); 18,125 red foxes (\$4 each); and 1,115 great-horned owls (\$5 each).

The same bounty on foxes and great-horned owls remains in effect during the current June to June year with one exception. No reward shall be paid on great-horned owls killed during the period beginning with the opening date of the small game season this fall and continuing until January 1, 1959.

Three Pennsylvanians Receive Awards for Advancing Cause of Conservation

Three Pennsylvanians were honored by The American Association for Conservation Information, at its annual May meeting in Wisconsin, for their contributions toward natural resource appreciation. Each of them used a different approach to achieve results. They are:

Mrs. Miriam Baker, the Pennsylvania State Museum, Harrisburg, for her unselfish devotion and dedication to the cause of youth education in conservation.

Game Protector Clarence Walker, for his long and successful promotion of sound resource management among the sportsmen, school children and farmers of Snyder County.

Mr. A. B. Eadie, Kittanning, for the worthy results of his years of leadership in Armstrong County and state sportsmen's affairs, and for his radio program on the out-of-doors.

TRAPPING DEMONSTRATION was feature of the Pennsylvania Trappers Association's 22nd annual convention, held last June at Ohiopyle. Andy Ewart, of Carmichaels, Pa., is shown here describing the set being made by Bill Nelson, nationally known trapping expert from Iowa. Convention chairman was Ed Danko of Uniontown.

PGC Photo by Jack Brion





TREE SEEDLINGS from the Greenwood State Forest Nursery are readied for planting by, left to right, Ronald Kennedy, Walter Sherman, Harold Robson, Gerald Smith and Wilbur Smith, crew leaders; Charles Hess, Association President; and Dave Steward, Pa. Dept. of Forests & Waters.

Corey Creek Watershed Association Starts Huge Reforestation Project

One-half million tree seedlings were planted this spring in the Corey Creek Watershed, Tioga County. Steep and eroded land, stony and unproductive acres were the "targets", covering 650 acres of the watershed. Crews of men armed with mattocks made an all-out effort to insure that the seedlings would become the forests of the future, in the meantime providing a means of conserving land and water. Birds and wildlife will also benefit from this program.

The need for tree planting in the watershed is not new. Seven hundred of the 15,000 acres in the watershed needed reforestation according to the Pilot Watershed Work Plan developed in 1953.

This plan was made by the local people with the help of the Soil Conservation Service and the Forest

Service. It is one of the 67 original plans authorized by the U. S. Congress outlining complete watershed conservation to be completed in a five-year period.

While farmer interest in conserving the farmland moved ahead, tree planting lagged. And the five years were almost up. Recognizing this, the directors of the Corey Creek Watershed Association decided to explore ways for getting more trees planted. They knew that tree planting requires an outlay of money. It takes place when farmers are busy with spring work. Seeds, fertilizers and fuel drain ready cash, and cost-sharing payments by the Agricultural Stabilization and Conservation program do not arrive until late summer.

Conservation agencies were polled for help. A spring tree planting program resulted. Teamwork put the plan into action.

Money was borrowed by the Asso-

ciation from a local bank to buy and plant the trees. The A. C. P. agreed to cost-share with the Association. Cost-sharing would pay for the trees and the planting.

Four tree planting crews contracted to hand-plant more than 300,000 seedlings on the steepest land. Level acres were reforested with the Association's newly purchased tree planter.

The supply of young trees was assured by the Pennsylvania Department of Forests and Waters. Farmers made application for areas to be planted which were outlined in the farm conservation plans they developed with the help of the Tioga County Soil Conservation District.

With the first signs of spring, trucks carrying seedlings from the state forest nursery rolled into Tioga County. Planting crews were ready to firmly anchor the soil with the new seed-

lings which will be the forests of tomorrow.

National Meeting of Farm Co-operative Leaders Scheduled for State University August 24-27

The largest annual National meeting on farm business, and the largest meeting of its kind ever held in Pennsylvania, is expected to attract 3,000 persons, including 1,200 farm youth and young farmers. It's the 30th annual meeting of the American Institute of Cooperation, August 24 to 27, on The Pennsylvania State University campus.

With "Cooperatives—Progress in the Space Age" as the theme for the vast meeting, experts from all sections of the United States will discuss topics ranging from research, education, pension plans, rural electrification, to the challenge of integration in agriculture.

PAYMENT FOR SEEDLINGS, a check in the amount of \$2,763, is presented by Charles Hess, right, president of the Corey Creek Watershed Association, to George German, District Forester in payment for the seedlings obtained from the Department of Forests and Waters.





Steady, Boy!

By William Boyd

A GONG sounds and a half dozen dogs in wire-separated yards quit whatever they are doing and hurry into their respective kennels as though it is part of an animal-training act.

This is but one of many amazing examples of dog training at the G. Warfield Dunkle hunting dog kennels along Pine Creek, near Jersey Shore, in Lycoming County.

Mr. Dunkle explains the use of the gong is a training procedure for dog owners who must keep their animals in centers of population where neighbors would be annoyed by the barking of the dogs. To quiet them and send them into their kennels, owners would press buttons in their dwellings connected with electrically-operated gongs at the kennels.

The animal trainer, whose love of dogs came to him from his father, the

late Forrest Dunkle, former Jersey Shore hotel proprietor and postmaster, has been preparing dogs for hunting for the last 25 years. He is known throughout the north-central part of Pennsylvania for the results he gets with dogs.

Mr. Dunkle works with pointers, setters, weimaraners, Brittany and Springer spaniels, German shorthairs, and a few others. Over the years he has trained hundreds of dogs which have brought great satisfaction and much game to their proud owners.

In the Dunkle kennels, capable of accommodating from 10 to 15 active animals, are a few highly intelligent animals which have known no other home. Their owners board them there and have them with them only during bird season in the autumn.

Among the regular boarders is a

dog grown old in field service which belongs to Jack Knight, nationally-known outdoors writer who is author of the Solunar Tables and resides in Williamsport.

The late Dr. Kilgus, long a member of the Pennsylvania Game Commission, always had Warfield Dunkle train his dogs.

The Dunkle dog-training methods are as effective as they are unusual. Somewhat removed from the kennels is a quail pen containing quail on which the dogs actually "work" during the training season.

In the pens are both hen and cock birds, and Mr. Dunkle demonstrates how he keeps them and yet uses them in the open to train the bird dogs under his control.

He released a hen from the pen with the confident prediction to me that the bird would return voluntarily to the wire enclosure from which he had released it. And, sure enough, the quail, after moving

about in high weeds for a time while two efficient dogs pointed it, came back to the pen and found her way to a funnel-shaped entrance through which she returned to the company of the other hens and the male birds.

Mr. Dunkle, who is but one of many skillful hunting dog trainers in Pennsylvania, a state which boasts some of the best pheasant and grouse hunting in the country, maintains a pigeon loft at the end of his dog yard. Often, the dog trainer says, the dogs in his kennel yards will "point" the pigeons for long-interrupted periods.

So that the photographer who accompanied me might get a picture of dogs actually on point, Mr. Dunkle pinned a live pigeon down at the edge of a plowed field.

He then released two handsome setters, one of them belonging to himself, from their pens and in a matter of a few seconds one pointed the pigeon and the other quickly

OBEEDIENCE LESSON is first step in training any hunting dog. Here trainer Dunkle teaches a young setter to stop and come on command.





LIVE PIGEONS are used to develop pointing instinct. Here the trainer shows how scent of live bird can hold two beautiful English setters motionless.

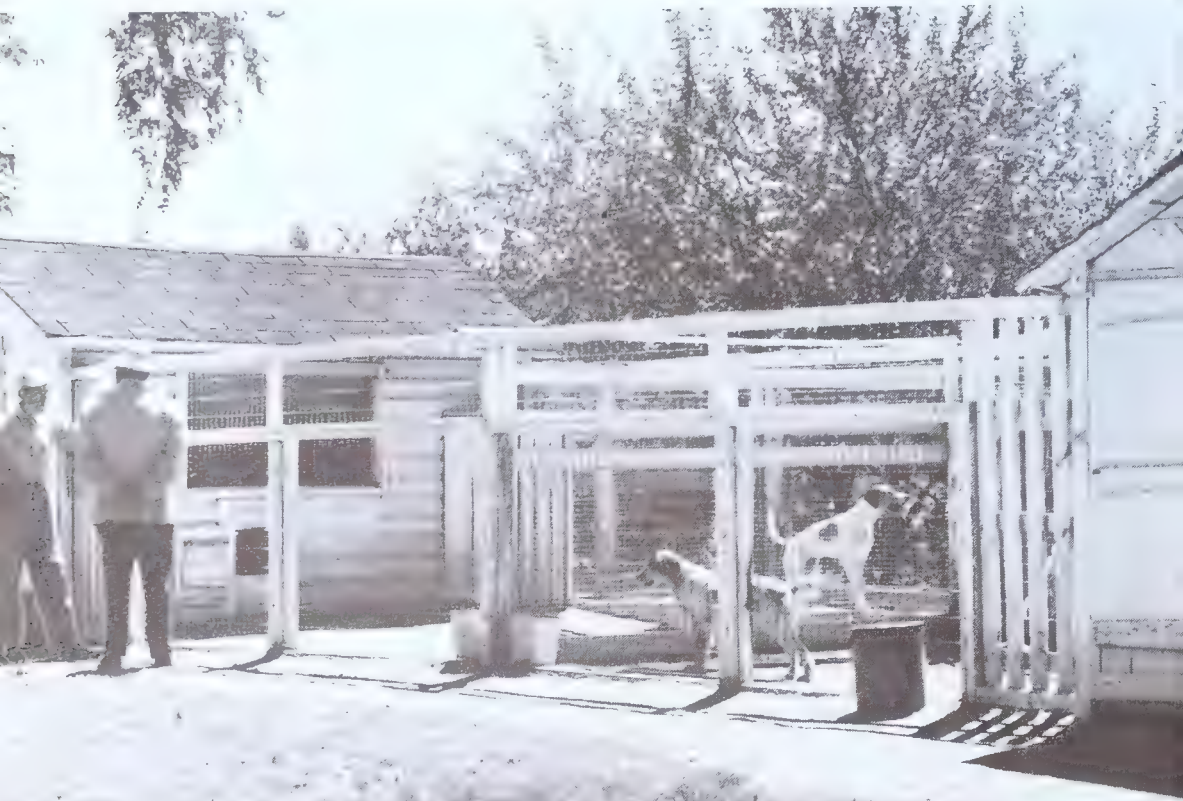
honored her point, the two standing entirely motionless for a good 10 minutes while the cameraman took pictures from various angles.

DUNKLE'S KENNELS are as clean and neat as the attractive creek-side home and lawn. The trainer works with pointers, setters, Weimaraners, Brittany and Springer spaniels, German shorthairs and a few other breeds.

Mr. and Mrs. Dunkle, who live in an attractive home on the banks of Pine Creek two or three miles above its mouth, have excellent hunting in their back yard and good trout and bass fishing just over the embankment from their back porch.

A number of the dog owners who attended the annual dog show of the Bald Eagle Kennel Club July 14 at the Sportsmen's Memorial Grounds along Loyalsock Creek visited the Dunkle kennels during the show, for most of those who had bird dogs entered in the competition know the Pine Creek trainer well.

At the Bald Eagle Club show near Williamsport a few years ago Mr. Dunkle, Harold Moltz, a former member of the Pennsylvania Game Commission, and Hayes Yorks used their favorite bird dogs to demonstrate in a weed-grown part of the show grounds how well trained bird dogs perform in locating wild birds for their owners.





OUTDOOR FUN WITH A FUTURE



Trapping With A Camera

By Ted S. Pettit

SETTING camera traps for birds, mammals or reptiles is a sport that provides all the excitement of big game hunting and a lot more, too. It's a year round activity with new subjects each season, and unlike hunting, fishing, or trapping, there is no closed season. You don't need a license either, nor need you travel long distances to get spectacular results.

With a little practice, you can get trophies that are every bit as interesting as a mounted head, skin, or fish and probably much more permanent. If you become an expert, you might even make your hobby a paying one, since there is always a ready market for good nature photographs. You may not become wealthy, but your hobby may pay for itself with a slight profit for travel expenses.

To be successful as an animal camera trapper, you must know something about the birds, mammals, and reptiles in your area and something of their habits. You should know the location of dens, burrows, runways, nests, and feeding or watering places. A few short hikes and some careful observation should turn up these sites for camera traps.

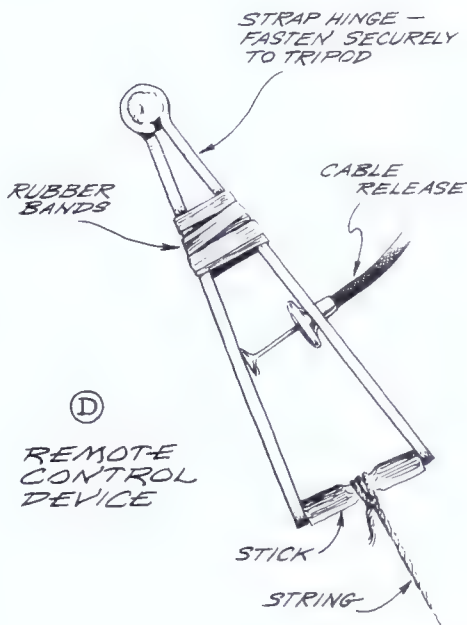
If you prefer to work in your own back yard or in a neighboring park, it may be advisable to set out some feeders and keep them stocked with a variety of foods for a couple of

weeks to attract your camera subjects.

In the sport of camera trapping, everything from a shrew to a bear and from a wren to a buzzard is fair game, so line up a variety of places where you know animals live—then make the trapping equipment.

Traps and Triggers

What kind of a trap you set depends upon the camera gear you use. Since almost any kind of a camera beyond a box camera will take a cable release, let's find out first how to set some traps for cameras of this sort.



The first step is to get a sturdy tripod, a four inch strap hinge, rubber bands, a twelve to eighteen inch cable release to fit the camera and 10 penny finishing nails cut to one inch long and filed round on both ends.

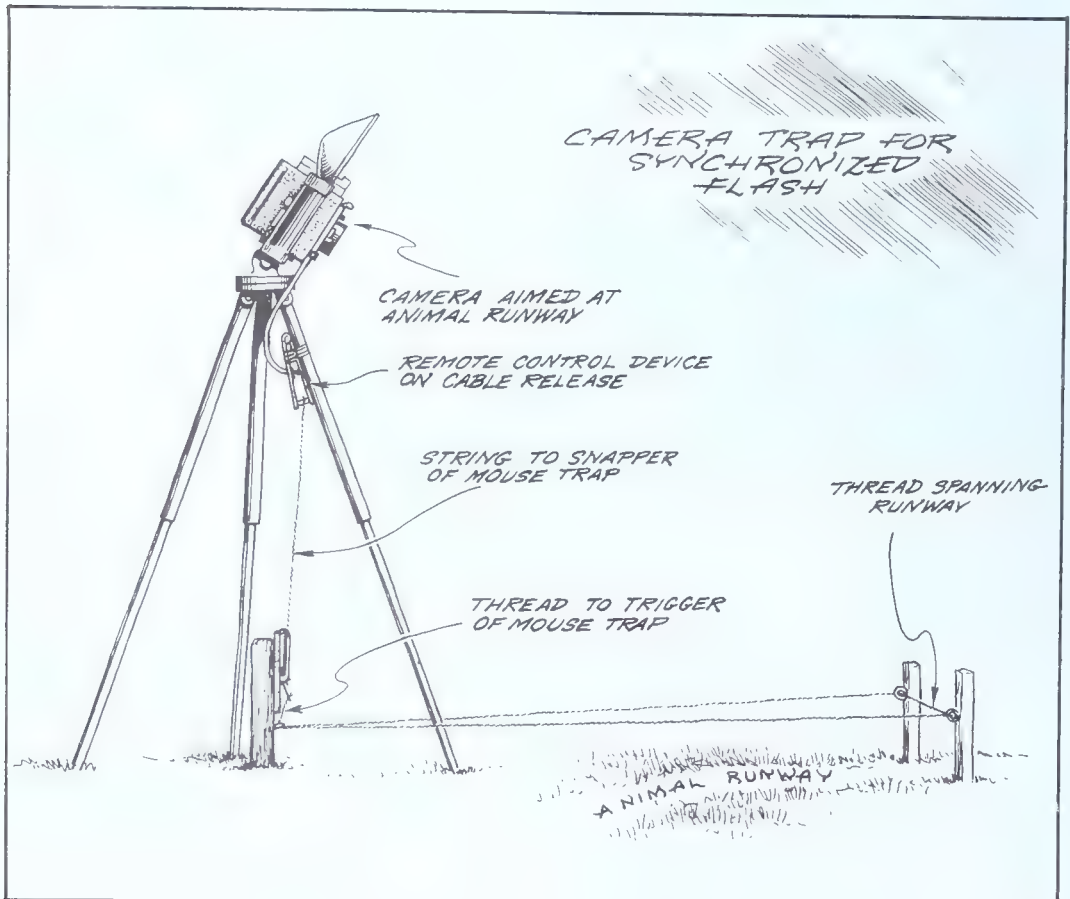
The illustration shows how to fasten the hinge to the tripod with rubber bands so that it opens and closes easily. Place the cable release through a screw hole in the hinge so that the closing hinge will press the release and operate the shutter. Then loop three or four strong rubber bands around the hinge to hold it closed.

Have the hinge open and hold it open with the one inch nail. Tie a piece of string or fine steel wire to the nail. When you pull the string or wire, the nail comes out of the hinge. The hinge closes and presses the cable release which trips the shutter.

Experiment with this gimmick for a while and work out any "bugs" in it. I've used it for twenty years, and it always works; but each time I set it up, it takes a little adjusting here and there to make it work smoothly.

The next step is to make a "trigger" that will pull the wire or string for you at the right time to take the picture. The key element in the trigger is a regular snap trap—either mouse size or rat size depending upon how easily the hinge gimmick works, and how smooth the cable release is.

Under the tripod, when it is set up at a den or runway in field or woods, drive a stake in the ground and fasten the trap to it so that the snapper snaps downward when the trigger is released. Set the trap and run a piece of string or fine steel wire from the snapper to the nail in the hinge and pull it as tight as possible. Now, when the snapper snaps, it pulls





out the nail, the hinge closes and presses the cable release, which trips the shutter and takes the picture.

To use this "Rube Goldberg" camera trap, let's suppose we want to try to get a picture of a woodchuck coming out of his hole.

We'll drive a small stake in the ground on one side of the hole and tie a piece of thread to it. We'll drive a stake in the ground on the other side of the hole and screw in it a small screw eye about 2" above the ground. We'll run the thread from stake number one through the eye in stake number two and tie to the trigger on the mouse trap. Now, when the old whistle pig comes out for a meal of alfalfa or clover, he hits the strings at the entrance of the burrow and takes his own picture. If a cottontail has taken shelter in the hole, he'll take his picture, too, when he comes out.

Instead of setting this trap at a woodchuck burrow, it might be set in a runway where deer, porcupines, beaver, raccoons or other animals pass by regularly to get to water or food.

But suppose you cannot find a burrow or runway—or suppose you want to work in your back yard or park. This is where feeders come in handy, and any bird or mammal that will

feed at a man-made feeder can be trapped on film with this method. Here's how!

Use a simple board tray as a feeder, or if you want a more natural setting, use a half log or even a round log about three feet long. Drill a one-quarter inch hole through the board or log from top to bottom.

Now, set up the tripod and camera with the mouse or rat trap fastened to the stake underneath. Set the trap and fasten the string or wire to the snapper and to the nail in the hinge. Tie a piece of thread to a peanut, kernel of whole corn, small chunk of suet or other bait, set the bait on the feeder over the hole. Run the thread through the hole and over to the trigger on the trap. Now, when bird, flying squirrel, or mouse picks up the bait, he sets off the trigger and takes his own picture.

This sort of rig can be set up anywhere—in a back yard, park, field or forest, on the ground, low on a tree, on a post or on the edge of water; depending upon the bait. You can get pictures of anything from a deer, opossum, raccoon, beaver, fox, snapping turtle, skunk, mouse, shrew, or bird. Meat or fish will attract turtles, skunks or raccoons if they are anywhere around. If you can catch some

field mice in a snap trap, try them as bait for snakes or weasels. It will work if you set the camera trap in the right kind of place.

After a little experience, you may want pictures that are more natural looking—without bait or artificial looking feeders in the picture. That's easy, too, with a little ingenuity and practice.

If you watch birds; for example, as they come to a feeder or to water, they usually perch first for a second or two before flying to the feeder or bird bath—they perch, that is, if there is a convenient perch nearby. Your cue, to provide a perch for them to use and rig up your trap so that when they land on the perch they trip the trigger and take their own picture.

One way to do it is to cut a branch that will make a natural looking perch. Cut it long enough so when you focus your camera on it both ends are out of the picture. Fasten one end of the perch to a support with a hinge or an improvised hinge so the perch will swing up and down. Support the other end of the perch with a piece of string tied to some-

thing overhead with a small rubber band or spring between the string and the perch. Now, when a bird lands on the perch it will bob up and down, but if the wind blows it, it will not move enough to trip the trigger. Run the thread from the perch to the trigger on the trap. When the bird lights on the perch, he will take his own picture.

For mammals or even turtles, the same sort of gimmick may be rigged up. Place a piece of natural looking wood in such a position that the animal must step on or move it to get at the bait. When he moves the stick he takes his picture—but the stick looks like a natural part of the environment in which the animal lives and the bait is outside the picture area—or the negative can be cropped so that the bait does not show in the final print.

A little practice first in the backyard will show other ways to rig traps for animals, and once you get your first sharp negative or transparency, you'll be well on the way to a life-long outdoor hobby.

SOIL AND WATER CONSERVATION GUIDE PUBLISHED

"Teaching Soil and Water Conservation: A Classroom and Field Guide" is a new publication of the U. S. Soil Conservation Service, the Wildlife Management Institute reports. The well illustrated, 30-page guide is available free to teachers and leaders of youth groups through the Service's main office in the Department of Agriculture in Washington or through its State and field offices. Ask for publication PA-341.

"Both science and social-studies teachers," the SCS advises, "can find suggestions that will help them guide their students in understanding the resources around them . . . Each activity is presented in two parts: A how-to-do-it part and an interpretation." The first part is written on a student-understanding level and the second is addressed to teachers to give readily available background information.

Increase Your Chances of Taking Top-Flight Wildlife Pictures

By Bradford E. Brown

EVERY year more and more cameras are being turned on wildlife. Both sportsmen and nature enthusiasts are taking up this fascinating sport 365 days a year. At first, chance pictures of wildlife are the rule, but sooner or later the shutterbug is not satisfied with this and desires to get close enough to catch the glitter in the animal's eyes. The answer to this problem is a blind.

Here is a simple plan for a portable blind like the ones the top professionals use. It is easy to build and the cost is slight. Dome shaped, the blind is approximately three feet ten inches high. It doesn't even take up as much space as a sleeping bag, rolling up into a bundle only two feet long and eight inches wide, small enough to be carried on canoe or back-packing trips.

The materials called for are as follows:



Thirty-two, 18-inch pieces of $\frac{3}{8}$ inch round reed.

A block of wood 6 inches square and 1 inch thick.

Sixteen pieces, $2\frac{1}{4}$ inch tubing; $\frac{3}{8}$ inch inside diameter.

Eight tees, $\frac{3}{8}$ inches inside diameter.

Four yards, 36 inch high-grade burlap.

A circle of low quality, loose-weave burlap—44" diameter.



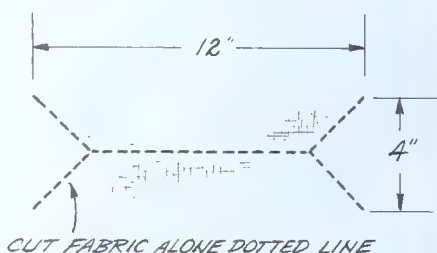
Directions for Building Blind

First take the block of wood and mark every two inches around the edge. Then saw off the corners, making an octagon. In the center of each face, drill a two-inch hole with a $\frac{3}{8}$

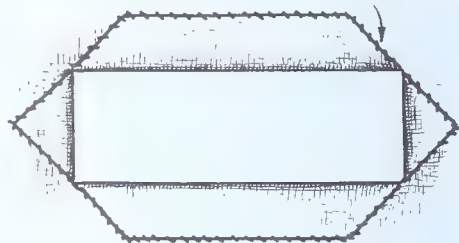
inch drill. This is the top of the blind. To construct the bottom, glue the tees to one end on each of eight pieces of reed. Now the base can be assembled by joining the pieces together. It is a good idea to mark the free ends of each reed in order to avoid confusion when dismantling the blind.

The next step is to glue the two-inch lengths of tubing to one end of each of the remaining sections of reed. The free ends should be sanded to fit into the tubing, and painted to distinguish them. The framework is now finished. To assemble, connect the base as before, then place the free ends of eight of the other pieces into the tees; continue this joining until three sections of reed protrude upward from each tee. Then bend the ends in and insert them into the holes of the octagon previously made.

Now it is time to construct the covering. Take the four yards of high grade burlap and place it around the frame. The bottom is perfect, but pleats must be made to fit the curvature of the blind. After the pleats are taken, the strip should be sewn together and the 44" circle sewn to



FOLD BACK FLAPS AND STITCH DOWN



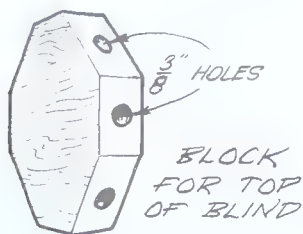
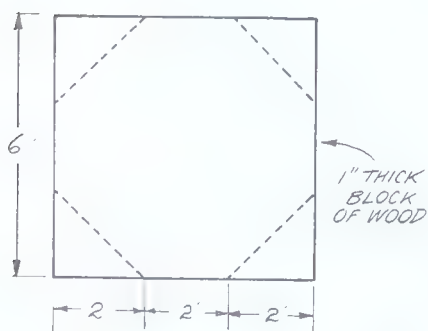
WINDOW FOR CAMERA

it. Tape attached to the base of the burlap to tie it to the frame is useful to prevent the cover from riding up. The coarse-weave burlap hides one's body, while the top allows for light, ventilation, and the observing of animals in all directions.

There is just one more thing to do to finish the blind. The window for the camera must be made. Set up the blind and determine where the opening would be best situated. The hole should be a rectangle (4" x 12"). The cut is made along the dotted lines. The flaps are then sewn back.

This blind can be conveniently carried and quickly assembled. With it, your opportunities for wildlife photography are widened. The next time you spot a nest or a den you don't have to rely on chance to get close enough—just set up the blind and wait. It is a good idea to allow your elusive subjects to accustom themselves to the empty blind before attempting to photograph them. Of course, the blind won't take the pictures for you. It takes great skill and patience to produce top-flight wildlife pictures.

Just one more thing, bring a cushion; the ground can get extremely hard. Good Luck!!





Hummingbirds In Action

By Donald S. Heintzelman

THE flash of a red throat, a blur of wings, a jabber of high-pitched squeaks, and the vision of a little bundle of feathers, is a typical view of the ruby-throated hummingbird in action. Belonging to the family of hummingbirds, *Trochilidae*, the ruby-throat (*Archilochus colubris*) is the only species of hummingbird known to occur east of the Mississippi River. There are, however, about thirteen additional species occurring in the western United States, as well as several hundred more species found in Central and South America.

These little birds, often heard before seen, are among the most interesting of all American birds. Only three and one-half inches long, they have the fastest wing beat of any bird in North America (about 55 beats per second), are the smallest of any American bird, and are among the tamest and most colorful. The male bird cannot be confused with any other

bird, for the bright red throat along with its size and rapid wing beat is sure identification. The female, although minus the red throat, has white on the outer tips of her tail feathers, which the male lacks. Both male and female are the same size. Young male birds in first year plumage merely have a small dark purple spot, quite small in comparison with the bright red of the adult, on the throat.

The food of the ruby-throat consists of insects, plant nectar, sap, and often sugar water from artificial glass feeders. Perhaps it is while the birds are feeding at the glass feeders that the interesting powers of flight are displayed to their fullest extent. Darting into the feeder, the long narrow tongue is inserted into the glass vial, while the wings are beating very rapidly—holding the bird suspended in mid-air. When completed feeding, the creature merely flies backwards,

much to the amazement of many people. These little birds are truly avian helicopters.

Long the subject of debate, the backwards flight was proven just a few years ago with the outstanding high speed flash photographs made by Dr. Harold E. Edgerton of M.I.T. These pictures were made with a special speed light, developed by Dr. Edgerton, whose light lasted for only $1/5,000$ sec. and was 400 times brighter than sunlight! Even at this high speed, the rapid action of the wings was not always stopped completely. The pictures for this article were made with a speed light lasting $1/2,000$ sec.

Almost as interesting as the bird itself is its nest. And no wonder! Built on a small low branch over water or near water, about ten to twenty feet above ground, the cup-shaped nest is only $1\frac{1}{2}$ inches in diameter. Constructed of bud scales and plant fibers held in place with spider silk, it is hidden by an outside layer of lichens which form an excellent coat of protective coloration. The two tiny white eggs, no larger

than peas, are brooded and the young fed entirely by the female.

During the fall migration, about mid-September, the hummers often travel along the same flyways used by the hawks and eagles over Pennsylvania. Numbers of hummingbirds have been seen migrating with the greater birds at such famous look-outs as Hawk Mountain Sanctuary. Most amazing, however, is the hummingbirds ability to fly non-stop in one night over the entire Gulf of Mexico toward their winter homes in Central and South America. This super power of flight again takes place in mid-May when they migrate north to the United States to begin anew another cycle of adventure and nesting.

Of all Nature's creatures, nowhere can a bird be found that is as interesting, friendly, and brave as these tiny birds. Nowhere can birds be found that are more courageous. So unafraid are these birds of anything, that they have been observed to attack a number of species of hawks and even eagles. Here truly is a wonder bird.





NOCKED ARROW is a dangerous situation in bow hunting. These two hunters are bound to have an accident sooner or later, the man in front driving the sharp broadhead into his own leg and the man behind inflicting a painful injury by stumbling into his hunting companion.

Let's Keep Archery A Safe Sport

By Tom Forbes

AN accident is an event that takes place without one's foresight or expectation. Archery has recently gained considerable prominence as a sport in Pennsylvania. It is too much to expect that accidents can be eliminated entirely but sound preventative measures can be taken to minimize the number of accidents and keep the sport of archery relatively safe. The bow is a deadly weapon and should be treated with the same respect as firearms. Instruction in

"Safe Gun Handling" is standard procedure in many youth groups throughout the Commonwealth. Good habits can be acquired and dangerous practices eliminated in every sport.

The dangerous practice of giving a bow and arrows to a youngster and permitting him to shoot in congested residential areas without any supervision or instruction has resulted in serious injuries in a number of localities. These incidents have been reported in the daily press and are of growing concern to authorities. There has been agitation to restrict both the sale and use of the bow but it is doubtful if the answer is to be found in the legislative field. Lack of knowledge of the potentialities of the bow



and carelessness are the major factors contributing to injuries.

The member clubs of the Pennsylvania State Archery Association will sponsor Bow Hunting Clinics at their home clubs on September 27 and 28. The purpose of the clinics is to teach safe bow handling on the field course, target range, and in the hunting field. Instructions on "How to Shoot" will be given to persons interested in taking up the sport of archery.

Archery is a competitive sport in which group participation, even in the hunting field, is the rule rather than the exception and certain basic rules of conduct are general in their application. The aim is to prevent accidental injury to participants in the sport or to spectators. The match rifleman would immediately recognize the similarity between the conduct on the range at a rifle match and at an archery tournament or field shoot. The rules that apply to safe gun handling on the shooting line or in the hunting field are also applicable

to the man armed with a bow. In order to mitigate the chance of accidents among converts to the bow, the cardinal rules for safe bow handling on the range and in the hunting field should be learned and practiced at all times. The safe way is the best way. There is no excuse for a careless act and "I'm sorry" cannot compensate for injuries.

A safe gun handler never lets the muzzle of his weapon point toward an individual and an arrow nocked in the bow should be handled in the same manner. General rules apply to group shooting and they are designed to promote the safety of the participants. Practice should be supervised and all shooting done from a common shooting line. Shooting should begin on a given signal and all archers should be on or behind the shooting line. Shooting should stop on all targets at a signal to permit the archers to proceed to the targets and retrieve their arrows. Never nock an arrow until you are in position on

SAFE CARRY for arrows involves a bow quiver which completely covers the sharp edges of the broadheads. Arrows can be quickly and safely nocked when the time comes for shooting but are safe and secure meanwhile.



the shooting line. A nocked arrow, like a loaded gun, is dangerous. Avoid shooting when people are passing behind the targets, even at a distance. An arrow may strike the ground, ricochet and travel a considerable distance before it comes to rest, or it may be deflected from its line of flight so as to endanger persons, although they may be at one side or another of the line of flight to the target and apparently consider themselves in a safe position. If your club shoots on an indoor range, the entrance should be back of the shooting line and other doors at the sides of the range or back of the targets should be locked against entrance from the outside. If panic locks are installed and fire regulations prohibit locked doors, notice should be posted at each of these entrances that the archery range is in use and to enter is dangerous. Do not permit interested spectators to wander over a field course when a shoot is in progress. If spectators are permitted on the course they should be accompanied by a guide to insure their safety.

The beginner should guard against self-inflicted injuries which may not be serious but are nevertheless painful and unnecessary. To avoid striking the lower part of the forearm with the bow string relax the bow arm slightly at full draw so that the elbow turns down and out. Train the shoulder of the bow arm to stay down and back to avoid striking it with the bow string. The tendency to hunch the shoulder of the bow arm is common among beginners who have equipped themselves with heavy bows which require undue effort to draw. To shoot properly an arm guard is a necessity. Proper shooting technique will result in the bow string striking the forearm of the bow hand just above the wrist. If you are twisting your wrist to prevent the bow string from striking your forearm you are holding the bow improperly and your marksmanship will suffer. Wear



a finger guard to protect the three fingers of your shooting hand. Beginners should be careful to proceed slowly and stop shooting before the finger tips become tender. If the bow is not equipped with an arrow rest, one should be installed. Stiff feathers can cut the index finger of the bow hand at the second joint as they pass across the bow hand. A loose feather may puncture the index finger. The arrow rest will also reduce the chances of piercing the index finger with a splinter from an arrow which breaks as it bends around the bow in the initial stages of flight. Make sure that the bow string is properly nocked before you release the manual pressure when you are bracing a bow. If the loop slips out of the bow nock as pressure is released, the limb can snap back and may injure the archer. When you brace a bow, flex it by increments until you reach full draw.

Overdrawing will injure the bow fibres and it may rupture immediately or the final break may come at some future draw. Inspect the bow frequently for bruises and checks or cracks. If you find the fibres of the materials of which the bow is made damaged, or a separation of materials in a laminated bow, retire the bow immediately, as it is a potential danger to the user. Check the fistmele frequently when you are shooting. It is indicative of the condition of either the bow or the bow string. One or the other is weakening. The same trouble may be expected if your arrows suddenly begin to fall low on the target. If the fault lies in the bow string it should be replaced before it breaks, as sudden release of tension when a string breaks places abnormal strain on the bow and may cause it to break and injure the shooter. If an arrow slips from the arrow rest during the draw, do not try to replace the arrow while at full draw. Take the bow down and repeat the draw. Otherwise you may unintentionally release the arrow and drive it into your bow hand. These precautions are practiced by all experienced archers and the beginner should not deviate from them.

Injuries sustained in the hunting field are generally self inflicted and most of them have occurred from the nocked arrow which the bowhunter customarily carries in a ready to draw and shoot position. To support this practice the bowhunter argues that movement will attract the deer's attention and all unnecessary moves should be avoided. The advantage, if any, of carrying the bow ready to draw and shoot is outweighed by the possibility of inflicting an injury to the person or to a companion. The bow is a cumbersome weapon to carry through brush or wooded country. The bow hunter is not too much concerned with his immediate surroundings; rather he is searching the surrounding territory within bow range

in the expectation of spotting a deer. A loose rock may turn under his foot or his foot may become entangled in a vine; he may slip; and any one of these conditions will cause him to lose his balance. In the effort to keep from falling he throws out his arms to regain his balance and too often the bow will strike a limb of a tree and turn the steel tipped arrow so that he falls on it. Bowhunters have jabbed the broadhead into the calf of the leg when stepping over a log. While there is no sure safe way of carrying a ready arrow, the chances of injury are reduced if the arrow is carried parallel and on top of the bow limbs and held in place with the hand that grasps the bow grip. Under any method the bow must be raised to shooting position when game is sighted and during this necessary movement the arrow can be nocked at the same time.

A knowledge of how accidents have occurred will point out ways to avoid a similar accident in the future. Herewith are some of the case histories from the 1957 bow hunting season. "Bow hunter carried arrows loose in hand. No quiver. Stumbled and threw bow and arrows to front as he fell. A broadhead penetrated his thigh." "Carrying arrow nocked ready to shoot, stepped over a log, fell and arrow entered calf of leg." "Arrow nocked in bow and hunter drove arrow into calf of leg as he crouched to go under some hemlock boughs." "Stepped on a rolling stone, nocked arrow cut left leg." "Slipped on a rock while carrying a single arrow in left hand, fell and sustained a chest wound." "Climbing a rock pile, nocked arrow inflicted injury in left leg above knee cap." "Shot at crow in a tree and falling arrow glanced off a limb, struck bowhunter and cut cheek to bone." "Overdrew broadhead and cut fingers of bow hand." "Walking along path behind hunting companion, the foremost hunter stopped suddenly and the hunter fol-

lowing jabbed the nocked arrow into his companion's leg."

Care in the selection of a quiver for your broadheads is excellent safety insurance. The broadheads should be covered with material of such strength that you will be protected against the cutting edges under any circumstances. Bow quivers are favored by many bowhunters. The bow and arrows make one compact unit and less time and movement are required to nock an arrow than is the case when arrows are carried in a belt or shoulder quiver. If you consider buying a bow quiver be sure that it provides a strong pocket that completely covers the broadheads. A belt knife is always carried in a sheath. Your broadheads are just as dangerous to your person as a knife. Select your foot gear so that it is comfortable and grips the ground firmly. You can take precautions which will prevent accidents.

Pennsylvania bow hunters have compiled a good safety record. No bow hunter has been wounded by another in mistake for game. This can partially be attributed to the short range at which bow shots are usually made. Nevertheless certain warnings bear repetition and must be kept in mind. Be sure it is a deer before you shoot. A movement may attract your attention and it may be made by another bow hunter who has been waiting in a blind. If you are in a blind and you see another bow hunter approaching, do not hesitate to announce your presence. Do not shoot where your arrow may top a rise and fall on the hidden slope. A bowhunter killed his companion in a Western State when he shot at a deer outlined against the sky on a ridge. The arrow missed and fatally injured his companion who was on the opposite slope. An arrow



BOW HUNTING ACCIDENTS are usually self-inflicted. Hunters who carry their equipment in this manner are apt to be involved in such an accident, especially when walking over rough terrain or in climbing over or through obstacles.

may be deflected from its flight to the target by a twig or other obstruction. Hold your fire if a companion is on your right or left front.

Guard your own safety and that of your companions. Remember that hunting game with the bow and arrow is recreation and you do not want any accident to spoil the enjoyment of your favorite sport.

Just Thinking Out-loud

By Horace Lytle

WELL, it won't be long now! Beginning August 1 we may again start working our dogs afield, getting them tuned-up for new seasons ahead.

Some will be thinking only, or mainly, of polish for gunning. Others will have a keen eye also on capturing Trophies in Trials.

The merry little Beagles will again be singing hound music, voicing their joy in the chase. And, as you listen to them, remember this: "If we ever efface the joys of the chase from the land, and up-root the stud, goodbye to the Anglo Saxon race, farewell to the Norman blood!"

As we think of this little hound's firmly entrenched position, so surely won and so richly deserved, thoughts turn to his cousin, the Basset. Here we have a typical hound, and from one of the oldest families. He, too, has gained much ground in popularity. Being slower than the Beagle, however, he cannot match the latter in a field trial. Yet that very fact of being slower is one of the features most cherished by his fanciers. They would not change him in that respect for anything in the world. Thus Bassets are seen in competition all too seldom. His owners fear the risk of speeding him up.

Even so, these questions penetrate the writer's thinking: Why not special stakes for Bassets only? Why not understanding Judges who would penalize for too much speed? Could judging not be based solely upon the desired Basset characteristics? Might

this not be accomplished by confining judging to experienced men with in-the-fancy? Would there have to be an inclination for more speed, if not encouraged by a handler? Or, if the handler actually *discourages* it?

Let's make a try at answering our own questions. Stakes restricted to Bassets only should be a definite possibility. Fifty years ago separate stakes were run for Pointers and Setters. This was to give the Pointers a chance, which they otherwise would not have had against the Setters in those days. WAIT—I hear you! You're saying: "Yes, but the Pointers came on to where today, except in Grouse trials, they're doing most of the winning—which but proves the fears of the Basset boys are very real."

My answer to which is simply this. The Pointers were aimed-at being able to compete on even terms with the Setters; whereas Bassets would not be so aimed as pertaining to the Beagles. The physical structure of Pointers and Setters is very similar—which isn't the case as between Bassets and Beagles. There's slim chance of Basset speed ever matching that of a Beagle.

There seems good reason to believe that Basset performance need never be judged on the same basis as that of a Beagle. In the pointing breed special trials are flourishing for Brittanys, German Shorthairs, and (more recently) even Weimaraners. It is a virtual certainty that none of these will ever be able to compete with Pointers and Setters, especially in Southern major circuit quail stakes or on the prairies of Saskatchewan or Manitoba. Yet their fanciers are having a whale of a lot of fun, and incidentally, improving the breeds, by competition within their own ranks



And where they do rank is as shooting dogs, which is the angle on which Judges rate them. What's more, there is a very rapidly growing interest in shooting dogs as such. This has become so intense that today we even have Championships in which competitors are judged upon service to the gun. Excessive range, lack of handling response, and the need for much scouting—are not only frowned upon, but can result in actually throwing a dog out. In such stakes as these, the other breeds, with continuing improvement, may always be given a chance. Judging a very important trial in this class some years ago, the writer placed a good Brittany bitch in third place. While her ground pattern was slightly on the "short" side, her bird work on pheasants sparkled too brilliantly to ignore.

Trials for Retrievers and Spaniels have developed amazingly, as was but to be expected. In these we have performance both on land and in water. Some of the retrieving is a sight to behold. And this writer is one who has always believed it almost a sin to damage any game and not bag it. There's one thing about these trials worth mentioning: There's no such thing as a birdless performance. Game is bought and put-out to be handled—both ducks and pheasants. Which recalls an amusing incident.

This brings us to a final thought, which we put as a question. Can it be a good thing for the sport in the long run that we see so many coon dogs in competition that bear such slight resemblance to hounds? This writer doubts it. If these trials were restricted to pure-breds, Redbones, Black-and-Tans, or other such true hounds, I cannot but believe it would reflect greatly to the over-all benefit of the sport.

For God has fashioned but few creations finer than a truly great Hound. No wonder MacKinlay Kantor was able to pen such a masterpiece in his story, **THE VOICE OF BUGLE ANN!**



BEAGLES AND BASSETS are used in much the same way but there is a lot of difference between the breeds. Here two Berks Countians, Roy Heffner, left, and Leonard LaFollette take a beagle and a basset afield for training.

Conditions Unfavorable in Duck Factory

Reports from the U. S. Fish and Wildlife Service and Ducks Unlimited indicate that weather conditions on the important waterfowl nesting grounds in Canada and northern United States were not favorable to waterfowl production during May of this year. In fact, above normal rainfall this month was said to be necessary if the duck production in the prairie provinces is not to be seriously curtailed this year.

High winds, whirling dust, alternating high and low temperatures, with little or no run-off, made up the undesirable weather picture for May, reports naturalist Bert Cartwright, Ducks Unlimited.



Skunk and Opossum Sets

By Larry J. Kopp

(Photos By The Author)

SKUNK and opossum trapping methods are as much alike as the techniques employed for catching large and small mouth bass!

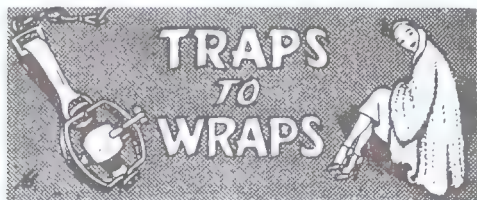
Both animals inhabit the same type of country and both prefer to be on the prowl during dark, rainy nights. Regular No. 1 traps are used for both fur-bearers. Furthermore from the human viewpoint, there is little difference in the effect of the repulsive musk with which both crea-

tures are possessed. The clincher, of course, is that both animals are addicted to the same kind of bait with equal zest.

Although it is customary, and rightly so, to make sets in areas where signs are found—it's a big mistake to limit sets to such areas.

Actually, skunks and opossums do a great deal of exploring during the course of a night—sometimes far beyond what you might conceive as their home area.

Therefore, some sets should be made in areas which the animals are likely to investigate, regardless of whether or not there are conspicuous signs around.





HOLLOW LOG SET should be made on a log which is closed at one end so that cottontail rabbits are not as likely to be caught.

The point is—don't spend all of your time looking for occupied dens, rock piles, slab piles, or abandoned buildings. Try, instead, to approach skunk and opossum trapping in much the same way as you would fox trapping; that is, rather than search for their homes—make a fair

number of your sets in places which the animals are likely to visit.

Illustrated here, are three of the basic sets which can be made. They are: The hollow log set; the artificial cubby hole set; and the natural cubby hole set formed by roots at the base of trees.

ARTIFICIAL CUBBY HOLE SET is made along fencerows, in brush or thorn thickets, and in other areas where no natural trapse can be found.





NATURAL CUBBY HOLE SET trapsites can be found in practically every small woodlot. Skunks and opossums spend much time in such areas searching for mice, insects, fruits and berries and also seek temporary refuge in such spots.

The overall theme, in each case, is to conceal an attractive bait in an out-of-the-way corner where it is hidden from crows, and setting a trap directly in front of it.

Natural, V-shaped cubby holes and hollow log trapsites can be found in practically every small woodlot in Pennsylvania. I say small woodlots because such areas are among the top-class haunts for both skunks and opossums. Here they search for mice, insects, wild fruits and berries, and also for temporary refuges to which they can resort when an unexpected storm develops during the night. In fact, I believe that skunks and opossums spend much more time seeking out such temporary shelters than most of us realize.

Certainly they seem to be acquainted with nearly every conceivable place of occultation in the country when you trail a skunk or an opossum through a slushy snow. Instead of roaming about aimlessly, they always seem to know exactly where they are going—specifically, from one place of refuge to another.

The artificially constructed cubby hole set is made along fence-rows, in brush or thorn thickets, and in other areas where no natural trapsite can be found.

Do not set traps in hollow logs that are open at both ends without closing one entrance. Cottontail rabbits find about as much delight in hopping through hollow logs, culverts, and the like, as teen-agers derive from rock-and-roll—but will not be eager to enter a hollow log through which they cannot see. It's equally a good idea to avoid constructing tunnel-type sets along old-time stone fences, unless, of course you want to be a square and catch all the bunnies in the neighborhood.

The most convenient, practical and in the long run, the most economical bait for both skunks and opossums, is canned fish such as sardines and salmon. Smoked fish are also excellent. Not only is the odor of fish one of the most fascinating attractions for nearly all carnivorous animals, but it remains at sets for a long period of time—even when the temperature suddenly plunges to zero in the middle of the night.

There are exceptions, but in my own experience I have found that chicken entrails, chicken heads—in fact, any kind of fresh meat is the poorest bait you can use. It simply does not intrigue a skunk or an opossum unless one or the other stumbles upon it accidentally.

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SEPTEMBER, 1958

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THE STORY BEHIND THE COVER

EVER try to hit a winged meteor with a flight pattern as unpredictable as that of a bat? Our cover hunter is about to try it. But while he's pondering such problems as elevation and lead on that pair of mourning doves, the targets are probably going to evade him no matter how fast his reactions.

Missing, however, is the rule rather than the exception in dove hunting. A survey last year indicates it takes an average of five shells to bag one dove. And that's one good reason why ammunition manufacturers love dove hunters. It's also a good reason why most hunters consider dove hunting the most challenging sport in the country. No American game bird presents a faster, trickier target than does the mourning dove which at times can skyrocket through the airways at over 70 miles per hour.

Perhaps the most surprising aspect of this kind of hunting, however, is that it draws more participants than most people realize. The U.S. Fish and Wildlife Service, in fact, rates the mourning dove as America's number one game bird. It is the only species which breeds in every state and last year hunters spent 11 million dollars in taking 19 million of the bronzed bullets—a higher bag than that registered on any other kind of game. Nobody knows exactly how many dove hunters there are. The greatest number are found in the southern states but the sport is rapidly gaining in popularity further north.

Dove hunting can roughly be divided two ways—jump shooting (such as that portrayed on this month's front cover) or pass shooting. In the South and West most of the gunning is “pass shooting” around grain fields or waterholes. The hunters merely sit or stand around until the birds fly in to eat or drink. Jump shooting, which probably is more common in Pennsylvania, is characterized by walking through corn fields (and please ask permission of the farmer first, especially if the corn has not been harvested) and taking the birds on the rise. In some areas, a day's hunt requires a combination of both since the birds normally do not make the long flights to feed and water during the middle of the day.

Come September and the first hint of frost, the first faint waves of migrating doves, and the age-old urge to find fun and sport afield, an ever increasing number of Pennsylvanians go forth in search of these tricky and tasty targets. In so doing, they are perhaps recapturing some of the thrills enjoyed by their pioneer ancestors. But unlike the passenger pigeon hunted by those early-day Americans, the mourning dove is in no danger of being eliminated from the hunting scene. Strict regulations (which this year prohibit the dove hunting before noon) insure adequate sport without danger to the breeding stock. And most of all, here's a bird that is just too darned hard to hit for the average hunter to score consistently.

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Cover Painting
By Ned Smith

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Respect Private Property-- Save Public Hunting

SINCE the days when Boone trod the "dark and bloody ground" of Kentucky, Americans have hunted wild game secure in the knowledge that the shy whitetail, the cunning quail and the noble wild turkey belonged to those skilled enough to take them. In sharp contrast to the feudal pattern in Europe, the people owned the game and hunting was—and is—a *public privilege*.

There are many problems facing hunting's future—fire, careless gun handling, public support of conservation laws to name a few—but the heart of the decent hunter's problem is and will be the fact that his heritage of public hunting takes place today on private land. And flagrant trespass, damage to property, insolence and ingratitude on the part of a minority of hunters have led tens of thousands of landowners to hoist signs forbidding trespass for outdoor enjoyment.

There is no quick solution to this problem. Any lasting solution involves education, example and aroused public opinion—in short, a unified, well planned and vigorously conducted program to improve the standard of hunter conduct.

The Izaak Walton League has just designed such a program. It is being called "Hunt America Time" and is actually three things.

First, it is a *season* when millions of Americans turn to the autumn-tinted fields and woodlands with the instinct of a pioneer people.

Second, it is a *program*—an outdoor education program—aimed at publicizing the threats to hunting's future.

Finally, and most important—it is a *pledge* offered to America's hunters to prove, by signing and observing it, their ability to control abuses of the privilege of hunting. They are being asked to pledge—1. To be law abiding; 2. To respect the rights and property of others; 3. To be careful with fire and firearms.

The Hunt America Time program is designed to aid the nation's hunters to do their job. Vigorous action CAN solve the problem. Landowners CAN admit hunters to their lands (at their own discretion, of course) IF the hunters of the nation unite to damn the arrogant and careless hunter for the slob he is, and establish by actual performance their fitness to inherit and maintain the great tradition of public hunting in America.

—Frank Gregg, Executive Director, IWLA







WALKIN' SHOES

By NED SMITH



Meet Our Newest Game Bird

TO MOST gunners September is just another month standing between them and the opening day of "hunting season," but to the dove hunters in our state the ninth month IS hunting season. Let the others await the frost on the pumpkin. These fellows get their kicks while goldenrod still blooms in the fence-rows and trees still wear their summer greenery.

It was not always thus. As recently as 1944 the mourning dove enjoyed year 'round protection in Pennsylvania. With the first open season in 1945, though, our hunters learned what sportsmen south of the Mason Dixon Line had long been aware of—that the mourner was a first rate game bird. As a result dove hunting has become one of the Keystone State's fastest growing sports—in fact, since that first opener the annual bag has more than tripled.

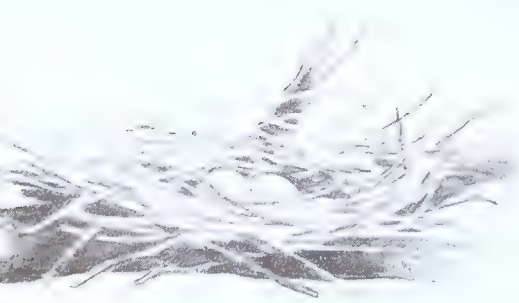
The mourning dove claims the distinction of being the only game bird that nests in all the states of the Union. Furthermore, with the extermination of the passenger pigeon it has become the sole surviving member of the wild pigeon family in Pennsylvania. Smaller and daintier than the domestic pigeon it nevertheless retains many of the family characteristics in its manner of flight, the fleshy membrane over the nostrils,

the prominent bare eye-ring, and the jerky walking gait. However, the small head, long, slim tail, and pointed wings give it a streamlined appearance that is uniquely its own.

In coloring the modestly-hued mourning dove is no less pleasing to the eye than more brilliantly colored birds. The upperparts are a soft grayish brown, flecked with irregular dark spots on the wings. The crown is gray and the long wing feathers are dusky with whitish edges. In flight the white tips and black sub-terminal bands of the gray tail feathers are revealed. The underparts blend smoothly from rosy tan on the chest to buffy on the belly. The flanks are gray. An iridescent patch adorns the sides of the neck of the male, while both sexes sport a small black spot beneath the ear.

The mourning dove is by nature a quiet bird. However, in the spring his fancy turns (like that of the young man) to thoughts of you-know-what, and his serenade can be heard at any hour of the day. No bird's song is more distinctive than the soft, melancholy *coo-aah-coo, cooo, cooo* of the mourning dove. The old folks say he's "calling for rain," but we know better than that—and so does his girl friend.

As befits so gentle a fellow, the dove's courtship consists chiefly of



FEELING
TIME



ONE DAY OLD



JUST OUT OF THE NEST

billing and caressing, to the accompaniment of muffled coos that are intelligible only to a lady dove. He executes an exaggerated flight that is thought to be a courtship display, and is occasionally seen in a half-hearted strut, but he can hardly be called a show-off.

That his love is of the old-fashioned variety can be attested by the fact that he retains the same mate throughout the long nesting season, even though several different broods are hatched and reared. That doesn't sound too impressive, even in this age of short-term marriages, but among birds it's pretty unusual.

Nest building is a cooperative undertaking—the male carrying the nesting material and the female doing the actual building. Only a few hours of each day are devoted to constructing the nest. Anyone looking at the structure would suspect that either the birds were quick to tire, or that they just ran out of time, for it is invariably a flimsy platform of barely enough small sticks, rootlets, and weed stalks to keep the two white eggs from falling through to the ground below. As a rule it is placed on a horizontal tree limb from five to thirty feet high, but I've found them on the ground as well. Several years ago I discovered one perched precariously on a slender sapling that had been bent to the ground like a croquet arch by a falling tree.

Both sexes take turns incubating. Frequently a dove with young will attempt to lead a person away from the nest by feigning injury. To the uninitiated the poor, stricken bird fluttering on the ground just out of reach becomes the most desirable object on earth. That he is being made a fool of by a feathered will-o-the-wisp never enters his mind until the clever mother, satisfied with the distance between the intruder and her nestlings, miraculously recovers and flies away.

The young doves are fed by regurgitation, their first meals consisting of "pigeon's milk," a fluid secreted in the crop of both parents. Poking their bills into the corners of the parent's mouth the squabs grimly endure the jerking and bobbing motions that precede the actual flow of the liquid to enjoy the refuelling that follows. By utilizing both sides of the parent bird's mouth both nestlings can be fed simultaneously. As the squabs grow older the pigeon's milk is gradually supplanted by partially digested seeds, and by the time they leave the nest their diet is identical to that of adult birds.

Like the young of so many pretty birds baby doves are incredibly ugly. Their bills are huge and bulbous. A wrinkled patch of bare skin surrounds their eyes and ears, and from one end to the other their shapeless bodies are clothed in unattractive white fuzz.

Fortunately they grow rapidly and change for the better. At the age of ten days most of their pin feathers have blossomed forth as genuine feathers, and in a few more days they will have left the nest. The body feathers are colored much like those of the adults except that they are edged in white or cream. But that horrible beak! As a lingering vestige of adolescence it is surely the columbine equivalent of acne or tooth braces.

Within the next few months the light-edged feathers are entirely replaced by the adult plumage. Among the last juvenal feathers to be moulted are the primary coverts that cover the bases of the outermost flight feathers. Hunters can sort out their bag according to age by examining these coverts. If any light-edged ones remain the bird is a young one.

There is good reason to believe that early hatchlings might mate and rear their own squabs late in the



WHITE-TIPPED PRIMARY COVERTS
INDICATE YOUNG BIRD



same nesting season. Doves frequently lay their first set of eggs as early as the middle of April and the last set months later. For instance, a nest I once found on the ninth of September contained two half-grown squabs.

As autumn approaches the birds can be observed in ever increasing numbers. Family groups and small flocks dot utility wires all over the countryside. Nevertheless, the hunter can ill afford to be haphazard in his selection of hunting territory. Cover is of no consideration, for doves want none of it, but food is another matter. Because they eat little but weed seeds and waste grains they should be sought where such fare is available. Look for them where there is plenty of bare ground, for a dove's small feet and short legs are not built for scratching in the leaves or clambering over luxuriant ground cover. Corn fields, especially the old-fashioned and hard-to-find cut and shocked variety are good because of both the weed seeds and the fallen grains of corn. Fields where soy beans, buckwheat, wheat, or the seeds of various grasses can be found are also high on the dove's Duncan Hines list.

Hunting doves in such places is largely a matter of walking them up

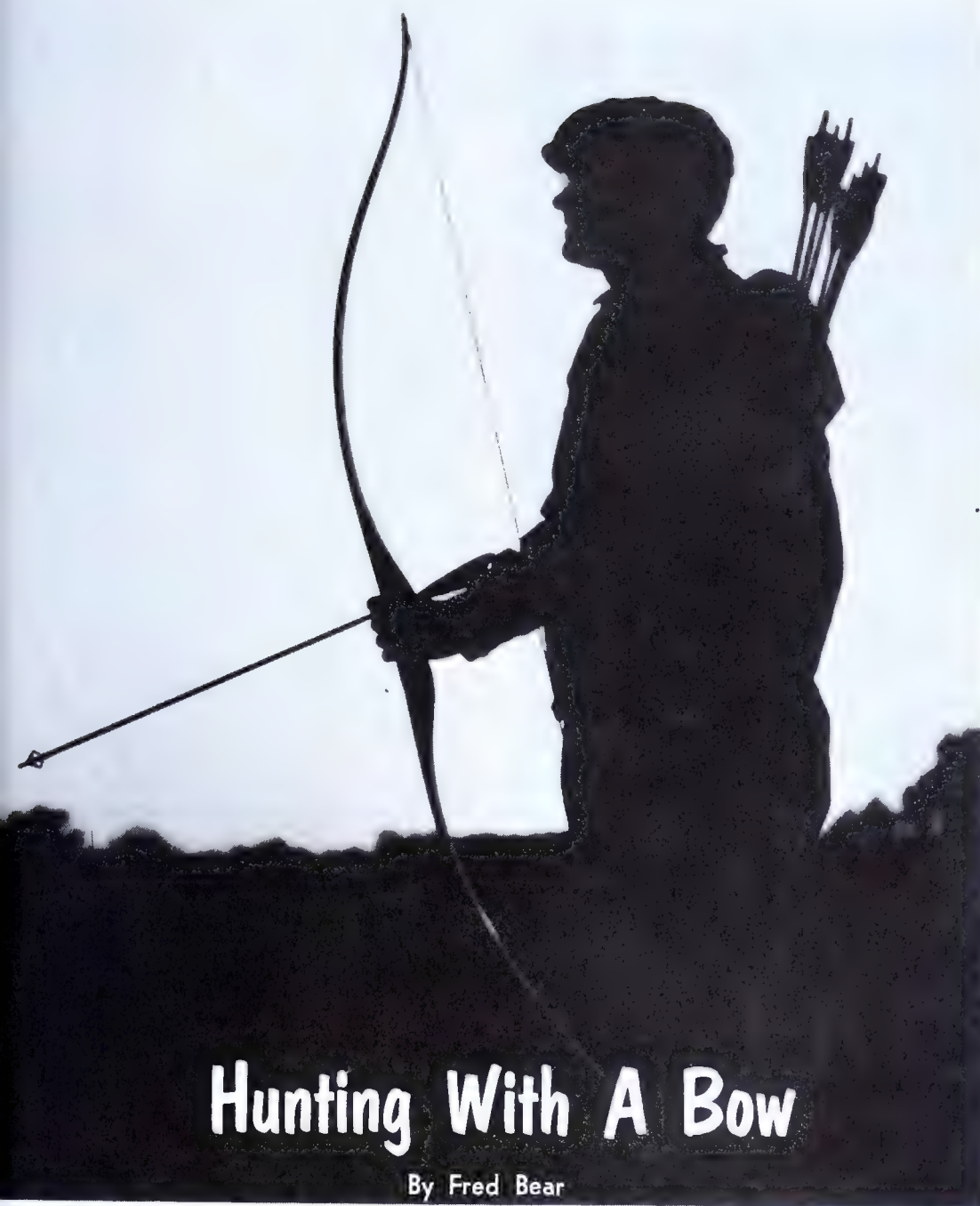
and taking your shots as they flush. However, if you don't take kindly to so much leg work there are other effective methods. One is to take advantage of their habit of flocking to certain drinking places at a particular time of the day—usually in the late afternoon. Some hunters hide at the water hole and take the birds as they come in, but pass shooting along the flight lanes offers even sportier shooting. The same type gunning can be had near the places where the doves come for gravel.

For all his apparent frailty the mourning dove can be mighty hard to kill. Whatever gun you use be sure it throws an ample pattern at the ranges over which you are shooting. As to shot sizes, 7½'s seem to be the most popular with 8's sometimes favored for close range jump shooting.

But before you can think of killing this bird you've got to hit him. The novice soon learns that his speedy appearance is not misleading. The downward stroke of the wings is quick and hard, each beat impelling the body forward with a noticeable shove. Scooting along on those whistling pinions at speeds in excess of forty miles per hour makes over-leading highly improbable.

Any way you take him the mourning dove is no pushover. He's got speed and he's got maneuverability. What's more, his flight is strangely deceptive. There must be something about long-tailed birds that makes it difficult to judge their range and speed. I've seen crossing ringnecks make crackshots look like amateurs—and for every time a ringneck does it a dove can do it twice.

That's as it should be, too. Make dove hunting too easy and we'd be spending our September days twiddling our thumbs and waiting for the frost to appear on the pumpkin.



Hunting With A Bow

By Fred Bear

IT HAS been often said that still-hunting is the only sportsmanlike way of hunting large game animals. In view of the long odds against the bowman, however, no method short of "shining" (using lights to sight deer) could fairly be called unsportsmanlike. True, station-hunting reduces those odds as compared with still-hunting, but still-hunting is the most interesting of all methods.

Hunting technique is more or less the same regardless of what species of game you are hunting, although the nature of the country and climatic conditions will influence methods somewhat.

Whether hunting moose in British Columbia, elk in Wyoming, or white-tails in Maine, the problem is to get within shooting distance of game. This, in the case of the archer-hunter,



ABOUT THE AUTHOR

Fred Bear was born on a farm near Waynesboro, Pennsylvania, March 5, 1901. His father, Mr. Harry Bear, still lives in the state, residing now in Carlisle. While in his teens Fred was apprenticed to a pattern maker and when still a young man moved to Detroit where there was a demand for this type of skill.

For many years Fred's recreational time has been devoted to testing his new ideas in archery tackle in the various game habitats of this continent and abroad. His success in this field is attested to by the fact that to date he has accounted for over 50 head of big game, including such species as Yukon grizzly bear, British Columbia stone sheep, Wyoming elk and African damalisque.

requires the use of the combined methods of stillhunting and stalking.

In hunting big game, three general methods are used:

1. Stillhunting
2. Stalking
3. Standing (picking a spot and staying on it)

Stillhunting simply means going carefully through the woods where game can reasonably be expected and keeping on until it is sighted. If hunting with a rifle one is then (vision in the woods being limited) probably within accurate shooting distance.

When hunting with a bow, however, one will seldom come upon game within shooting range and is therefore faced with the problem of stalking to within shooting distance. So in hunting with a bow one is really not only stillhunting, but stalking as well and the term "stillhunting" combines both methods.

Standing consists of taking up a station within shooting distance of a runway, game trail or feeding ground and just staying there.

Where to Hunt

Lacking experience in recognizing where game can be found, the hunter will save himself much time and disappointment by hiring a guide or making inquiries of the natives of the area.

Any large game country has heavier concentrations of animals in some sections than in others. This is due to several things. Great portions of otherwise good cover may not furnish suitable food. Also, the fact that game was in one locality last week does not necessarily mean that it will be there this week.

For instance, in the scrub oak country of the north and northeast sections of the United States, deer sometimes feed on acorn from early fall until late into the winter, often digging through a foot of snow to uncover them. On the other hand, in

seasons when the acorn crop is poor, the deer may consume the available supply within a week or two. Under those conditions it would obviously be a waste of time to hunt the oak regions.

The point is this. Do not set out to watch a runway on the first day in the woods. Explore the country first, look for fresh tracks, not old ones, and also whatever feeding signs can be found.

It may be necessary to devote several days to this activity but it will be time well spent. After these preliminaries one can be reasonably sure that he is still hunting or taking a stand where deer are known to be.

At certain times the bucks are not with the greatest concentration of deer and here the hunter is cautioned against spending too much time still-hunting in sections where only does and fawns are seen. Look for small trees and bushes with bark skinned off by bucks rubbing their antlers, or watch for places where they have pawed the ground to ascertain if there are any bucks around.

After a hunting spot has been settled upon, the matter of how to hunt will be governed partly by the density of the brush and cover. Some areas are entirely too dense for still-hunting even when the footing has been made comparatively quiet by recent rains. Also, in scrub oak country especially, it is often unadvisable to stillhunt except during or immediately after a hard rain, because the thick carpet of dry leaves makes it practically impossible to move quietly.

Whenever a noiseless approach is impossible the most satisfactory method of hunting with a bow is to find a good location where game is likely to pass and stay there.

The problem for the new bow-hunter is to know what to look for. He naturally expects to see the whole animal standing clearly in sight but that is not usually the case. He must learn to look for and recognize off-

color spots among the trees or brush. A patch of red or brown might be part of a deer's body or neck. Or a slender strip of white could be the inside of a leg. An ear or an antler, or just the flick of a tail should command the sharpest attention. Odd shapes should be considered, too. The log that is rounded on one end may be a deer.

During the first few days in the woods the hunter will be slow to distinguish ordinary objects from those that are actually game. He will lose much time and probably overlook some good opportunities. After a few days, however, he will become more expert and will not often expect an entirely open view of the animal;

BUCK RUBS are good indications of the presence of antlered deer. Small trees and saplings are used in early fall to rub off the velvet.

Photo by Don Heintzelman.



perhaps nothing more than the highlights of his antlers or the reflection of his shiny hair under certain light conditions.

Stands or Blinds

Early morning, late afternoon or evening are the best times to hunt. Whenever possible the stand or blind should be prepared in advance. For a stand, condition the ground underfoot by scraping out all leaves, twigs and sticks so that a turn can be made quietly for a shot in any direction.

Sometimes it is advisable to erect some sort of a blind to help conceal the hunter. However, do not be too elaborate about it. Above all, do not import any foreign material. In other words, don't make a blind of cedar in a patch of scrub oak. It must be remembered that game lives by being unfailingly alert to its surroundings.

A great many hunters prefer the station method of shooting regardless of circumstances. If this type of hunting is planned, prepare a series of stations before hand, if possible, in likely looking spots where deer are known to travel. Do not make the mistake of locating stations on game trails simply because the trails look well travelled, unless there are unmistakable signs of fresh tracks in them. These are often just summer trails and it is not unusual for them to be abandoned for weeks at a time in the fall or winter.

Don't waste time at waterholes, streams, lakes or salt licks unless signs and tracks show they are being used. Deer sometimes go for days without visiting a watering place during the fall or winter.

Occasionally a number of runways or trails lead through a narrow neck of swamp or out of a timbered area and may spread over a space from one to three hundred yards wide. Such spots are known as crossings.

While the limited range of the bow cannot command that much area, deer can sometimes be directed to

within bow range by a piece of paper or a jacket placed on a limb or stump or some of the trails farthest away.

Do not be surprised when the best trails of this year prove worthless next year. Feeding conditions determine where the animals travel.

Give a favorite station a days rest occasionally. Deer are alarmed when a particular area is continually scented and will avoid it temporarily.

Station hunting in wooded country is, for the bow and arrow hunter, without a doubt the most productive of all methods. However, it calls for unlimited patience and warm dress if the weather is cold. Few archers are blessed with enough patience to stick to this style of hunting. My favorite method of hunting deer is to watch some likely spot for an hour in the morning, stillhunt in between and take a station again for about an hour before dark.

Stillhunters should travel slowly and quietly—at a speed of between one-quarter of a mile to one-half mile per hour. A slow, rather methodical even pace is good. Or if the nature of the terrain allows, pick out what seems to be advantageous points of view ahead; more or less hurry to those positions, and then carefully survey the surroundings. This method should be used in crossing over places where there is scant cover or in hunting hilly areas where the hunter has been exposed to whatever animals may be on the side of the hill nearest him. The idea is for the hunter to be stationary while trying to catch sight of the animal when it moves.

Some successful stillhunters use this stop and go method very effectively. One I know will hurry for about two hundred yards and then stands perfectly still for five or ten minutes. His theory is that while covering the same amount of ground he is standing still a much greater part of the time than the hunter who goes slowly and cautiously.

In thick woods or dense swamps

where vision is limited the best procedure is to go along very cautiously. Take advantage of game trails, paths, and old lumber roads to make the going easier and more quiet. Examine everything in sight. When coming to open places where movements cannot be concealed or thick cover where it is impossible to get through without making noise, barge right ahead; get it over with. In scrub oak or jack pine country, anywhere the branches grow close to the ground, get down on hands and knees now and then and look through underneath the branches.

Except for such occasions, walk erect. Travel in the regular stride of a human being, take it easy and make no apparent effort to be quiet. In this way the animal's curiosity may be aroused instead of scaring him, and there will be times when shots can be taken even after the hunter has been seen, simply because he does not look directly at the game. Watching out of the corner of the eye without making any quick turns while moving within shooting distance is the thing. If the animal thinks he is rather well hidden and the hunter gives no sign of having seen him, he may just let him go by. Don't make any fast moves until ready, and then shoot quickly. There won't be much time.

A wise hunter takes advantage of the sun when it is low in the sky. A bright sun in the eyes of an animal is as blinding to him as it is to the hunter and one is definitely in luck when a stalk can be made with the sun at his back and the wind in his face.

The animal's nose alone will spoil the hunter's plans as many times as will its ears and eyes together. This statement should be qualified as applying particularly to those hunting with a bow, because they must approach much closer. The unpredictable air currents of the woods make the nose a deer's best defense.

An important phase of hunting



Photo by Don Shiner.

STATION HUNTING requires a great deal of patience but for the bow hunter it is probably the most productive method. Stands should be selected in likely looking spots where deer are known to travel.

technique should be considered after a shot is made. Perhaps it is almost dark or for other reasons it was not possible to follow the flight of the arrow and the hunter is not sure whether he has made a hit or not. Sometimes he can tell by the sound of the arrow striking. This may vary from the chug when hitting a rotten log to the sharp crack of one striking a board, the latter indicating that some bones have been struck. Whether the deer's tail is up or down when he runs off has no bearing on whether he is hit or not. Unless one is definitely certain that he has missed



Photo by Hal Harrison.

BROADHEADS MUST BE SHARP if they are to do their work effectively. A few minutes spent at home or in camp to sharpen the cutting blades and to examine arrows for imperfections will do much to increase your chances for success.

he should give himself the benefit of the doubt and find and examine the arrow carefully. If the arrow cannot be found, examine the trail for signs of blood or hair.

Hits in the back or neck are the ones most likely to put the animal down on the spot. However, a hit in any part of the body cavity will most likely be fatal and the animal is not likely to go far providing he is not followed immediately.

He will probably go only a short way and lie down. And if he is given plenty of time to bleed that is where you will find him. Leave him alone for a half hour at least, an hour and a half if possible. An arrow kills by hemorrhage.

The quantity of blood found on the trail has little bearing on the location of the hit as a flesh wound sometimes bleeds very freely. Many times the most mortal hits leave only a few drops of blood every few yards,

but internal hemorrhage is great. Light pinkish blood is a good sign and indicates a lung or neck hit. Very dark blood is usually a good sign too, and a greenish mixture tells of a paunch shot.

To do effective work the broad-head has to be extremely sharp. Fair penetration may be obtained with even a dull head but arteries that would otherwise be cut will then be merely pushed aside. Sharp arrows will usually pass entirely through animals and cut ribs off in doing so. Penetration is not a problem. For quicker kills use well designed heads made from good steel. Select those having the largest cutting area. Single blade heads are the least desirable.

It is advisable while on a hunting trip to get into the habit of practicing every day but not intermittently or where game might be alarmed. At noon after lunch is eaten is a good time. Get the arms and shoulders

loosened and confine the shooting to two arrows at most because they will have to be sharpened before starting to hunt again.

Practice shooting from different positions. In stillhunting one often has to shoot from a kneeling position. Sometimes one is forced to shoot with the bow held horizontally and rather close to the ground in order to clear obstacles. The hunter will have occasions to shoot almost directly to the rear of him. He will get shots from both sides and from almost every other conceivable position.

There will be opportunities also to shoot at running game. The problem of "how much to lead" will be perplexing. No fixed rule can be stated except to say that most of us do not lead enough and that most misses are made by the arrow going behind the animal. Try consciously to over-lead.

On a walking deer, for instance, at

40 yards, the arrow will strike from a foot and a half to two feet behind where aimed providing that the deer does not hear the bowstring and stop. On a deer that is running slowly or merely loping, the lead at the same distance will be between 8 and 10 feet, depending on how fast a bow and how light an arrow is used. If he is running fast the lead must be 20 or 30 feet at 40 yards.

Whether this lead is achieved by swinging ahead of the animal and shooting, or holding ahead of him and shooting when the time seems right, will depend mostly on whether the country is open or densely wooded. Many neat misses have been made with both methods.

If one shoots at a running deer in the open he will probably find him swinging with it and on through ahead, loosing on the swing as is proper when wing shooting with a shotgun. On the other hand, if the

Photo by Hal Harrison.

FOLLOW EACH DEER at which you have taken a shot whether or not you think you have scored a hit. Allow at least a half hour, preferably longer, for the animal to seek a place in which to lie down. An arrow kills by causing hemorrhage and certain types of bleeding may take considerable time.



deer is running through thick woods where an opening through which to shoot must be picked, the best he can do is to hold on an opening and loose when the animal gets into a position he thinks will give the proper lead.

Good practice for this type of shooting is to have someone roll cardboard discs along the ground or down a hill and shoot at them from various distances.

Bowhunting Apparel

In traveling through the woods many hunters, in an effort to be as quiet as possible, spend entirely too much time with their eyes on the ground searching for places to step. The eyes should be trained to glance at the ground ahead and pick a path for the next half dozen steps. His subconscious mind will then soon become accustomed to guide the feet noiselessly in this direction.

Footwear should have rubber soles. Leather soles are too smooth. The Indians coated their moccasins with tar or spruce gum, warmed it and

DEER ARE COLOR BLIND and many bow hunters are making expert use of camouflage. Remember, however, that it is a good safety practice to warn other hunters of your location if you are so entirely hidden.



walked on sand to obtain a non-slip sole. The Indian type moccasin, however, is not recommended for the average hunter who spends most of his time on city streets. The feet have to be toughened to be comfortable in this flexible footwear. Best for warm weather hunting is the gym or tennis shoe. For colder wear a light weight rubber bottom with leather top or an all leather boot with rubber sole. For mountain wear, the boot should be of heavier construction with counters for better foot support. Hobnails are not for the archer. Rubber soles are best even in climbing rocky mountains.

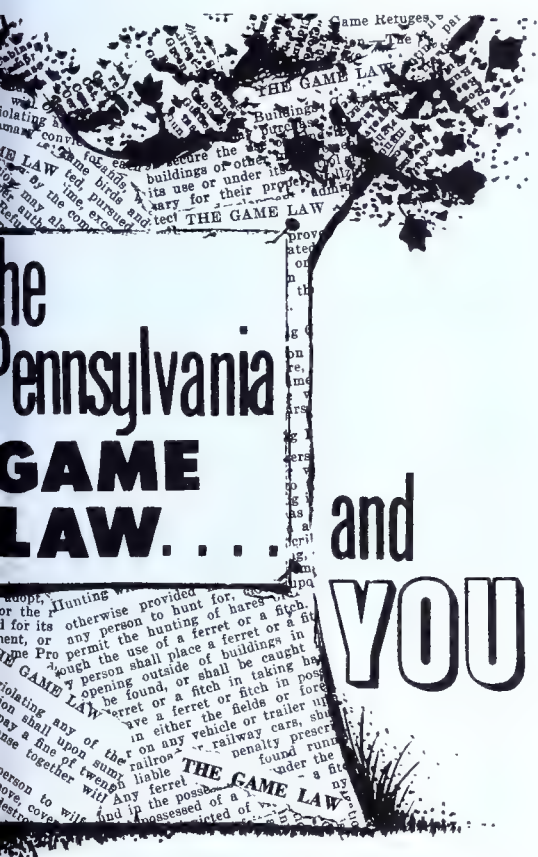
Many bowhunters are swinging to a bow quiver to carry arrows when hunting. It allows for more freedom of movement. Three or four arrows can be carried in the bow quiver and one in the hand for a total of five at most. For serious big game hunting I have rarely had use for more than five arrows in a single day.

Shoot for That Spot!

Regardless of how thoroughly all instructions on clothing, tackle and hunting technique is employed, and giving due credit to the need for practice shooting, the most important factor and the hardest thing to remember, even for the seasoned bowhunters, is the rule of instinctive shooters: intense concentration on the very small spot where a hit will bring death most quickly!

He may ignore all advice from experts, dress in the gaudiest colors and cover his person with gadgets, but if he can remember this, in that split second allotted for a shot, that he must control the urge to shoot at the *whole* deer, he has an enviable quality that will bring him more trophies than all the other qualities combined.

Admire the sleek body and count the points after the arrow has found its mark. Antlers are like magnets to the eyes and are the gremlins that keep venison on the hoof and out of the stew pot.



Trespass Is Bad Yet

Three of a Series

By John Sullivan

Deputy Attorney General

IT MAY come as a big surprise to some thoughtless hunters, but a hunting license is not a free ticket of admission to someone else's property. It grants no right, either direct or implied, to enter upon the lands of another person in pursuit of game.

In cases of simple trespass, the Game Law itself is not involved. The quarrel is between the landowner and the trespasser, and the landowner has his ordinary right of civil action against those who go upon his land

without permission. However, the Game Law does have very specific safeguards for the landowner's benefit, and under these provisions of the law the Game Commission itself, through its game protectors, can take direct action against the heedless or negligent hunter whose vandalistic instincts are aroused as soon as he is out of sight of the corner traffic cop.

Under Section 801 of the Game Law it is unlawful while hunting or trapping to damage real or personal property, "or to leave gates or bars open, or to break down, destroy or injure fences, or to tear down or scatter rail, post, wood or stone piles, or through carelessness or negligence to injure livestock of any kind." The only exception is that a mortally wounded bird or animal may be removed from refuge in a rail, post, wood or stone pile or fence, if permission is obtained from the person in charge of the property and if the property is restored.

The Game Law's provisions covering property damage and safety are fairly long, but essentially simple. For instance, it is unlawful to fare forth with a weapon in hand while under the influence of liquor or narcotics.

A loaded weapon may not be carried in a vehicle on a public highway. Game protectors and police are exempted from this provision.

It is unlawful to shoot at game while it is on the highway, or to fire across a highway unless the line of fire is so high above the road as to preclude danger to anyone on the road.

The area within 150 yards of any occupied dwelling is a safety zone in which shooting is prohibited, except by the occupant or with his permission.

All of these provisions carry a fine of twenty-five dollars. By contrast, it will cost you only five dollars to violate the requirement that small game hunting parties are limited to five persons.

During the big game season some special safety requirements are in effect. It is unlawful to shoot at a target, except game, unless the target is within 200 yards of camp and is so situated that the bullet cannot travel more than 15 yards beyond it, making allowance for deflection up to forty-five degrees. Random discharge of firearms is also prohibited. Those provisions do not apply when signaling for assistance, or to regularly established ranges.

One exception to the rule that the Game Law does not directly concern itself with trespass as such is that covering sanatoria, institutions and parks. If these are properly posted it is a violation of the Game Law to shoot within the posted areas, and subjects the offender to a fine of twenty-five dollars and costs.

All of these safety precautions are important, but the crux of the entire safety section is that dealing with the shooting of human beings "in mistake."

It is unlawful to shoot at, wound or kill a human being in mistake for either game or a wild creature of any description. But note that this involves only those cases where the hunter mistook the person for game, not where the hunter actually shoots at real game and the bullet or arrow accidentally strikes a human being.

Violation of this provision is a mis-

demeanor. If the person is uninjured, for a first offense the fine is one hundred to three hundred dollars and a two-year mandatory license suspension. If the person is wounded and it is a first offense, the offender shall pay the injured party from two hundred to five hundred dollars and serve from one to three years in jail, this in addition to a five year mandatory license suspension. If the person is killed, the indemnity is five hundred to one thousand dollars, the imprisonment two to five years, and the suspension ten years. For failure to pay, a penalty of one day in jail is imposed for each dollar of fine, up to a maximum of one year in jail. Hunting while under license suspension calls for an additional jail sentence of three to six months.

The constitutionality of these "mistake shooting" provisions has been upheld in *Commonwealth v. Miller*, 8 D. & C. 445, 1926; *Commonwealth v. Shovlin*, 16 D. & C. 549, 1932, and *Commonwealth v. Simonton*, 56 D. & C. 220, 1946.

Every hunting accident involving an injury to a human being must be reported. Responsibility rests upon "every person who shall have caused or been involved in" such an accident, whether it was himself or someone else who was injured, whether it was while hunting or trapping, and whether the weapon was a gun or bow and arrow.

The report must be made within 72 hours, either by registered mail to the Game Commission at Harrisburg or by delivering it to a salaried officer of the Commission. If physically incapable, an agent should be delegated to make the report.

Failure to render assistance after injuring another, or fleeing the scene, subjects an offender to a one hundred dollar fine and a ten year license revocation.

For second offenses with respect to any provisions dealing with injury to human beings the fine is automatically doubled.





Use of A Power-Line Right-of-Way By Game After Chemical Brush Control

By W. C. Bramble and W. R. Byrnes

THERE is no doubt that chemical treatment of brush on rights-of-way changes the plant cover considerably. It transforms the wild tangle of brush to produce a cover that is different in plant composition from both the original brush on the right-of-way and in the surrounding natural forest area. It is also equally clear that uncontrolled brush cannot be tolerated on a major transmission right-of-way which must be maintained for constant flow of electricity to industry and homes. Whether or not a change from woody brush to the low vegetation desired on a right-of-way is injurious to game or favorable to it, is a question that is often raised by conservationists and sports-

men. The purpose of recent research on this problem at Penn State was to give an answer to this question as well as to indicate the type of permanent cover that may be expected to be produced by commercially applied chemical sprays.

In order to answer the questions which have arisen, five commercial spray treatments and one cutting treatment were applied to a major transmission right-of-way in central Pennsylvania in the spring of 1953 and the winter of 1954. Treatments were repeated four times along a three-mile section of a right-of-way passing through a typical mixed oak-hickory forest in central Pennsylvania. The tests were laid out in large uniform areas so that the sprays could be applied with commercial rigs and crews; and so that research tests could be made in sufficient repetitions to give confidence in the data obtained.

The treatment techniques used

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may be briefly characterized as follows: Treatment A, in which no spray was applied and in which the brush was to be recut during the winter of 1957-58; Treatment B, a broadcast B, a broadcast stem-foliage spray of 2,4-D plus 2,4,5-T in water; Treatment C, an oil-water, semi-basal spray also using 2,4-D plus 2,4,5-T as active ingredients (in this technique, 10 gallons of oil were added to each 100 gallons of spray to make an oil-water spray mixture); Treatment D, a summer basal spray in which oil was used as a carrier with 2,4-D plus 2,4,5-T as active ingredients; Treatment E, a winter basal spray, also with oil as a carrier, with 2,4,5-T as the active ingredient; and Treatment F, a broadcast foliage spray of Ammate in water.

It should be noted that all but one of the active ingredients used in the chemical spray treatments were the hormone-like substances of 2,4DD or 2,4,5-T. These are essentially growth stimulants, not poisons, and react by making certain changes in the physiology of the plant which causes death. Ammate, which is an ammonium-sulphamate compound containing nitrogen, is also non-toxic to animals. Ammate breaks down rapidly upon reaching the soil and furnishes nitrogen for plant growth.

Types of Plant Cover Produced By Chemical Spraying

Probably the most important differences in ground cover were those produced by broadcast sprays as compared to the selective basal sprays. In these tests, broadcast sprays caused a marked disturbance of the original ground cover by producing a brown strip of dead vegetation during the first growing season following spraying in 1953. The total ground area covered by living plants after broadcast spraying amounted to 10 percent of the total ground area. This meant that there was considerable room for invasion of the right-of-way by wind-born or animal-born seed plants.

One of the most interesting changes that occurred following broadcast spraying was an invasion of Ammate areas by the common, upland fireweed. This plant completely dominated the Ammate areas in 1954 forming a dense cover which grew to as much as 8 feet in height. It gradually disappeared over the next four years and by the end of the growing season in 1957, while still abundant in small patches, it was of low cover value. Invasion by fireweed also occurred following the broadcast hormone spray and the oil-water, semi-basal spray; but to a lesser extent than in the case of Ammate. It is probable that the release of nitrogen following the Ammate sprays and complete killing of grasses and weeds originally present on the area simulated post-fire conditions which made invasion by fireweed relatively easy. In the case of hormone-like sprays, however, grasses were only top-killed; and, while fireweed came in as a prominent invader, it could not occupy entire areas and soon diminished to become patches of small cover value.

Another marked effect of broadcast sprays was a killing of low shrubs, such as blueberries and huckleberries. These plants, which had been abundant in small patches before spraying, became very sparse or absent after spraying. They remained sparse during the next four years, although there is some indication that they may slowly recover. A third characteristic of the broadcast areas was an invasion by sweetfern; a shrub which came in sparsely at first but over the five growing seasons of observation became abundant in small patches. It is possible that this shrub, which spreads by underground roots or rhizomes, may occupy an increasingly larger area of the right-of-way in the future. It is browsed by deer in the winter and has a relatively high food value among woody browse plants.

In contrast to the broadcast sprays, winter and summer basal sprays caused little disturbance of the right-of-way. Ground cover was killed immediately around the plant clumps sprayed, but living plant cover remained over approximately 75 percent of the total area. The ground vegetation at time of spraying, which was dominated by a bracken-sedge-herb-blueberry cover, was maintained after spraying and has persisted for five growing seasons. Blueberries and huckleberries are still abundant. Fireweed has never become anything but sparse as it only came in around sprayed stumps.

All of the spray areas, regardless of treatment, appear to be slowly returning to the original bracken-sedge-herb-blueberry type of cover, although the broadcast areas are still low in blueberry (Fig. 1). It is probable that this cover will eventually return to all areas. The total cover, while greatly reduced by the broadcast sprays for one growing season following spraying, also has re-

covered so that it has become complete except for the stumps and stone that are present on the area, or occasional bare spots produced by outside influences. There has been no erosion or destructive soil disturbances following spraying even on the steeper slopes as the original litter and humus of the forest was not disturbed and remained as a protective layer until the plant cover had regained possession of the area.

Game Usage of the Right-of-Way

It is normally expected that common game species of the Allegheny plateau will use rights-of-way created through the oak-hickory forests of the region. Moreover, the cover type created by rights-of-way differing in plant composition from the surrounding forest should increase game productivity. This is in agreement with the so-called "edge effects" that occur when two different types of vegetation meet to combine the desirable features of each at their peripheries. It is also in agreement with the view that game species are



PELLET GROUPS collected on the right-of-way show use by grouse (upper left), rabbits (upper right) and deer (lower right).



WILD TURKEY TRACKS in the snow on the area sprayed with chemicals indicate the presence of this popular game bird. Use of right-of-ways by turkeys was difficult to determine, however, because of the birds' wide cruising radius.

avored by several cover types, adjacent to each other, for their feeding, hiding and nesting requirements.

One of the principal methods used for observation of game usage of the right-of-way has been a study of animal signs such as pellets, tracks, and evidences of feeding (Fig. 2). A special study of this and other features of game usage was made in the year immediately following spraying. This has been supplemented over the past four years by observations made by workers on other phases of the project. During the winter seasons, special trips were made over the right-of-way to detect tracks and other signs of game usage after fresh snowfalls (Fig. 3).

A special type of observation was used on the right-of-way to obtain quantitative figures on usage by which comparisons could be made between the various treatments (Table 1). This consisted of count-

Table 1.—Average number of animal pellets per treatment obtained from twenty, 3 x 100-foot transects, for each treatment.

Treatment	March 1954	April 1955	April 1956	April 1957	Total
Deer					
A Unsprayed	349	52	1,177	1,115	2,693
B Broadcast (D + T)	112	113	260	426	911
C Semi-basal	216	95	316	432	1,059
D Summer basal	391	218	433	632	1,674
E Winter basal	532	277	868	830	2,507
F Broadcast (Ammate)	165	124	610	668	1,567
Rabbit					
A Unsprayed	101	296	482	150	1,029
B Broadcast (D + T)	95	467	248	124	934
C Semi-basal	3	167	30	35	235
D Summer basal	132	106	99	28	365
E Winter basal	102	211	335	116	764
F Broadcast (Ammate)	2	85	26	30	143
Grouse					
A Unsprayed	2	0	6	0	8
B Broadcast (D + T)	0	0	0	1/4	1/4
C Semi-basal	0	1/4	1/4	0	1/2
D Summer basal	0	0	1/2	0	1/2
E Winter basal	0	0	13	0	13
F Broadcast (Ammate)	1	0	1/4	1/4	1 1/2

Table 2.—Number of times common wildlife species or signs were observed on treatment areas from Oct. 1, 1953 through Oct. 1957.

Treatment	Deer	Grouse	Rabbit	Squirrel	Turkey
A Unsprayed	83	12	51	6	0
B Broadcast (D + T)	45	8	8	2	31
C Semi-basal	62	7	3	6	1
D Summer basal	53	5	12	8	1
E Winter basal	59	8	25	11	1
F Broadcast (Ammate)	69	8	7	18	15
Total	371	48	106	51	49

ing game pellets on twenty line transects, 3 feet wide by 100 feet long, in each of the treatment areas. The system was to count the pellets on these strips, remove them at the time of counting, and then take a re-count at the same time the following year. The number of pellets were taken to be an indication of the degree of usage of the area, although correlations with a specified game population of a given size have not been worked out.

To sum up the wildlife observations, it can be said that white-tailed deer, ruffed grouse, wild turkey, gray squirrel, and cotton-tail rabbit were observed either through direct observations, or signs, using all of the treatment areas during the period of observation from October 1, 1953 through October, 1957 (Table 2). While it is still early to differentiate between the long-time effects of the different treatments and the particular cover that they have developed, certain trends are becoming evident.

White-tailed deer have been observed on all treatment areas and their usage has increased over the five-year period. As is to be expected, there is less winter feed on the chemically treated plots where woody brush has been practically eliminated. It follows that in the winter the unsprayed areas of the right-of-way were used most heavily for feeding and for winter bedding (Fig. 4). During this time, the adjacent woods

were seriously over-browsed and nearly bare of low cover and food. However, it is interesting that the deer fed heavily in the chemically treated areas in the spring and in the early summer, particularly on young shoots of bracken and on the common herb, wild loose strife. This is an important time for fawns, in particular, to have good feeding. Moreover, deer commonly bedded down in the summer on chemically treated areas in patches of sedge and grass.

Ruffed grouse were also observed on all treatment areas. In recent years they have more often been found on the edges within 150-200 feet of the right-of-way rather than on the right-of-way itself. This emphasizes the importance of the right-of-way as a creator of edge effects.

The use of the right-of-way treatment areas by wild turkeys has been difficult to determine as this is a bird with a wide cruising radius which in its feeding is apt to wander over a much larger territory than would be influenced by the right-of-way. Broadcast spray areas on which a grass-herb cover has become dominant, however, were attractive to flocks of young turkeys which use such openings when they are feeding on various insects that are more abundant on the grassy right-of-way than within the wooded areas (Fig. 5).

As might be expected, the use of the right-of-way by the gray squirrel

was restricted mostly to edges where oaks and other mast-producing trees and shrubs exposed to full light and lessened competition furnish food to these animals. Squirrels were observed to cross the entire right-of-way from one side to the other during the winter when they could be tracked in the snow, and in the fall apparently buried acorns which germinated to produce young oak seedlings at some distance from the edges. It is expected that their activities in this connection will have a strong influence on future maintenance of the right-of-way.

Although cottontail rabbits are not a common game animal of the forested plateau, they have increased on the treatment areas over the five-year period and appear to be building up under right-of-way conditions. This is presumably owing to the abundant low food and cover that has been created on the right-of-way and to the increasing number of woodchuck holes appearing on the right-of-way itself which furnish refuge to the rabbits.

Although this project did not in-

clude special studies of the effect of the spray materials as chemicals directly upon wildlife, it has been well established that both the hormone types of chemicals and Ammate in the concentrations used in chemical spraying are not poisonous to wildlife. In no case during the current study was any wildlife species found in a damaged or unhealthy condition that could be attributed to chemical spraying. As a matter of fact, on one broadcast spray area of 2,4-D plus 2,4,5-T, a thriving nest of young rabbits was found in the summer following spraying in a clump of grass from which brush has been removed by heavy application of the chemical. Also, a young healthy fawn was found under a clump of brush on the right-of-way one day after basal spraying with 2,4-D plus 2,4,5-T. Other game such as deer, grouse, and wild turkey used chemically treated areas freely in the year following spraying and thrived (Table 3).

Conclusions

It is becoming evident from con-

WOODY BRUSH growth was prolific on the unsprayed area in 1957. This right-of-way was cut during the winter of 1951-52. Such vegetative conditions are attractive to deer but it should be recognized that these rights-of-way represent minor land areas among our extensive deer range.



trolled research studies that chemical spraying can be carried out on rights-of-way so as to remove the brush and provide for efficient maintenance of the power facilities, and also to create food and cover conditions conducive to increased game usage. The new cover types created on the right-of-way following spraying act both to furnish edge effects and to diversify the cover types in close position to each so that the game can travel from one to the other for necessary life activities. While it is true that broadcast spraying removes certain shrubs which could be maintained by selective basals, where the game species favored in a given area are best provided for by a grass-herb cover, broadcast spraying may be a desirable type of treatment from the viewpoint of the game manager. Such

sprays should be done thoroughly so as to kill brush in one treatment, and then, selective basals be used as follow-up sprays to remove unkilld woody brush and to provide continued maintenance. Basally sprayed rights-of-way produce a tight cover that is relatively inexpensive to maintain and will be highly satisfactory both for the utility and for the game manager or sportsmen. It should be recognized that these rights-of-way represent minor land areas among our extensive game lands and should not be expected to provide, for example, winter browse for a large herd of deer. Such forage will have to be created by extensive cutting for wood products. However, rights-of-way, when maintained under chemical spraying, certainly are capable of bearing more than their fair share of the food and cover requirements for game species.

Table 3.—Recorded and observed seasonal utilization by common game species of common plants which occurred on the power line right-of-way.

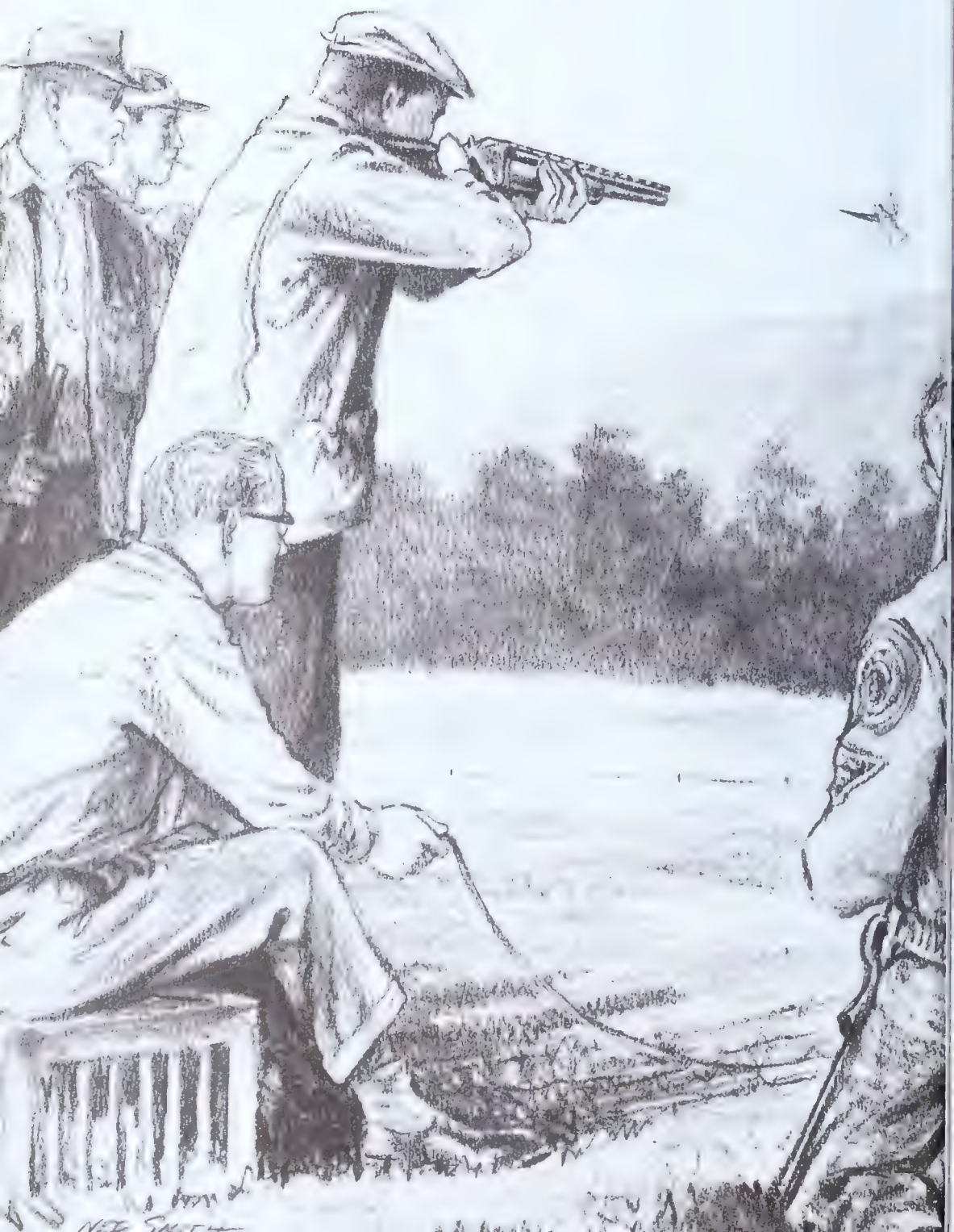
H = high utilization: rated high in published lists, or from observations in this study.
L = low utilization: rated low in published lists, or from observations in this study.

	Deer					Grouse				Turkey				Rabbit*			
	Sp	Su	F	W†		Sp	Su	F	W	Sp	Su	F	W	Sp	Su	F	W
Herbs and Grasses																	
Bracken	L	L	—	—		—	—	H	—	—	—	—	—	—	—	—	—
Sedge	H	L	L	H		—	—	L	L	L	H	L	H	—	—	—	—
Loosestrife	L	L	—	—		—	—	—	—	—	—	—	—	—	L	—	—
Panic grass	L	L	L	L		—	—	L	—	—	L	H	L	—	—	—	—
Fireweed	L	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—
Miscellaneous grasses	—	—	L	L		—	—	L	L	H	H	H	H	—	—	—	L
Strawberry	—	—	—	—		H	H	H	L	—	—	—	—	—	H	L	—
Sheep sorrel	—	—	—	L		H	L	H	L	—	—	L	—	H	H	—	—
Ladies tobacco	H	L	L	H		—	—	L	—	—	—	—	—	—	H	—	—
Shrubs																	
Blueberry	H	L	L	H		—	H	H	H	—	H	—	L	L	L	L	H
Teaberry	L	L	L	L		—	—	H	—	—	L	L	L	—	—	—	—
Witch-hazel	L	L	L	H		—	—	H	—	—	—	H	L	—	—	—	L
Blackberry	L	L	L	L		L	H	H	L	—	—	L	L	H	H	H	H
Sweetfern	L	—	L	H		—	—	—	—	—	—	—	—	—	—	—	L
Huckleberry	—	—	—	L		—	L	L	L	L	H	H	H	—	—	—	L
Border Trees																	
Bear Oak	L	L	L	L		—	—	H	—	H	H	H	H	—	L	—	H
Quercus spp. (fruit)	H	H	H	H		—	—	H	—	H	H	H	H	—	L	—	H

*Reputed by some authorities to eat nearly every kind of green grass, succulent herb or flowering plant, also cones and shoots of most woody plants.
†Seasons: spring, summer, fall and winter.

Hegins, Pennsylvania- Flyer Capitol, U. S. A.

By Joe Carricato



HEGINS LABOR DAY COMMITTEE—ever hear of it? Don't feel bad, most Pennsylvanians haven't. And yet in the past 24 years this committee has registered scattergunners from all parts of the United States. Records show entries from Europe and South America too.

The Hegins committee is synonymous with flyer shoot—"the" flyer shoot. Specifically, it is the Fred Coleman Interstate Race which attracts some of the best state, national, and international shooters. Held in conjunction with the Coleman shoot is the Penna. 21-yard Single Championship.

The good folks of Hegins make no bones about it: "It's the biggest shoot of its kind in the United States," they'll tell you. Well, believe it or not, I had never seen it nor heard about it, yet this wing-ding has been held for 24 years right under my nose—only an hour's drive from Harrisburg.

Fact is, I had never seen any of the live-bird shoots held over a great portion of southcentral and southeastern Pennsylvania. Vincent C. Marinaro, fishing and hunting buddy who is an authority on everything pertaining to outdoors was first to call this bit of Pennsylvania gunning lore to my attention. He felt that as a reporter I should certainly witness this big event. So we did.

From Harrisburg, the route to Hegins is No. 325, 26 miles over the black asphalt ribbon through Clarks Valley to Tower City. A right turn eventually leads to a long climb to the top of Big Lick Mountain. The roadside sign reads, "elevation 1,400." The next target is a speck on the map designated "Joliette."

Over and through a scrubby, strip-mine scarred hogback, then begins one of those second-gear drops into the valley which nestles Hegins and several other Pennsylvania Dutch communities.

At Hegins on a Labor Day there's

no need asking directions to the shoot. Everybody is there; the town itself is empty—a ghost town. That's a fact; I couldn't find a place open to buy film.

The park and picnic grove is cordoned with cars. From 8 a. m. to 5 p. m. the blast of shotguns echoes through the valley. The only break is at lunchtime; the events are then recessed for an hour.

At the traps, the contestant on the firing mark may be a count from Spain, Italy, Uruguay, Argentina or Cuba. At one time or another those countries have been represented. The gorgeous blond filly at the next set of traps is the wife of a millionaire sportsman from Alabama. And so it goes; mingling with Keystone shooters are contestants who follow flyer shoots wherever they're held. Apparently, the Coleman Shoot at Hegins is one of the biggest.

What exactly is a "flyer" or "live bird" shoot. We had heard some wild stories about them which certainly didn't apply to the Hegins shoot. Let's follow the action exactly as witnessed.

The contestant at the firing mark faces 10 bird-house like boxes 30 yards out in front of him. Only five of the traps are actually needed for one shooter; doubling expedites the shoot. Two shooters can be accommodated before filling the traps.

The contestant calls out to the "puller:" "are you ready?" The puller, sitting at his wooden console contraption back of shooter, replies, "ready." The shooter tenses to a ready stance and hollers, "pull!" The puller immediately yanks one of ten cords running from his console to the traps. The trap is sprung. All sides of the box or trap fall, revealing a pigeon.

The unpredictable target takes off in any and all directions. The shooter doesn't know which of five traps is to be sprung at his command; so he usually centers his gun over the closed traps. After the first trap has been



sprung, the gunner can center on the remaining four to cut down on the length of swing.

The shooter fires twice at each bird. It must fall within the 50-yard roped-off boundary; so he doesn't usually take a chance on only one shot. Two shots are fired so fast it sometimes sounds as though only one were fired. If the target falls outside the boundary, or if it escapes to the surrounding countryside, the referee calls to the scorer, "lost bird!"

If the flyer refuses to fly, the puller jiggles the trap to scare it into flight. If it obstinately (or prudently) refuses flight, the referee declares "no bird!" The bird is chased off and replaced in the trap.

The contestant shoots over three different sets of traps. In a field of some 200 shooters, this procedure takes up the entire morning and well into late afternoon. In 1946, the Coleman Shoot had 395 entries. According to William S. Willier, major-domo of the shoot since its inception, that number of shooters never appeared before or since in any similar event in the United States and Europe.

After a shooter hits 10 straight birds, his next 10 must be taken at a 32-yard mark. You can be sure the field of entries is well thinned out by

that time. Many an expert trap and skeet shooter got his come-uppance appearing at flyer shoot for the first time. At the event we witnessed, four contestants of a field of 224 got their 20 birds. They split top money. Shoot-offs are held, but only for trophies.

This particular event is not exactly a poor man's game. The entry fee for the Coleman race is \$25. That's not too much for a dyed-in-the-wool flyer fan. But there are added optionals at \$10 each. An extra ten bucks gives you a chance at sharing the "1st ten" pot; another \$10 for the "1st fifteen"; another ten-spot for this and that. The total race and optionals add to a fat \$65.

The Pennsylvania 21-yard Championship is separate from the Coleman race. At this event, the contestant faces five traps, 21 yards out. He is permitted only one shot at each bird and the gun must be held below the elbow until the bird is on the wing. The entry fee and optionals for this total \$60. So, to enter both events with all the optionals costs \$125.

According to our observations, the favorite shootin' iron appeared to be the over-and-under double. And you should see some of those guns. Like all gun cranks and prima-donna skeet shooters, these fellows will spend hundreds of dollars on their equipment—anything for a real or imagined advantage.

There were also quite a few side-by-side doubles in evidence, all with ejectors. A few shooters had auto-loading jobs. Apparently, most old-timers consider an automatic too much of a risk. A jammed action—just once—can mean the difference between finishing in the money and being just another shooter.

Under the Hurlingham rules (a printed pamphlet), the gun must be no larger than a 12-gauge. The shot may be 7½'s or 8's, but the rules specify a load not greater than 1¼ ounce.

Hand loads are not specifically prohibited but factory loads are the custom. There's a reason. Factory loads are accepted but hand loads may be challenged. The challenger puts up \$5 to enter a protest. If the load he challenges is a fraction over 1¼ ounce, the shooter may be disqualified. On the other hand, the challenger loses his fiver if the load is found to be within the prescribed regulations.

It can be anticipated that some question will arise as to the "humaneness" of this live-bird shooting. The main objection would stem from the fact that, unlike wild game hunting, the bird is captive before a ready shooter.

One of the Shoot officials was asked about this aspect. It was also asked if any protests had been received from any group.

The event had been visited several times by groups representing humane societies. Apparently they found no basis for complaint. At least, none was ever officially registered.

"You can see," our informant said, "that practically 100 per cent of the birds are dispatched by these expert shooters. The very few cripples are quickly and mercifully killed by the attendants."

How about cruelty to the birds? We understand that in some smaller, informal shoots, participants contrive various mechanical or physical gimmicks to inhibit the birds' natural flight. The idea is to give visiting competitors a rough time by presenting an unnaturally tricky target.

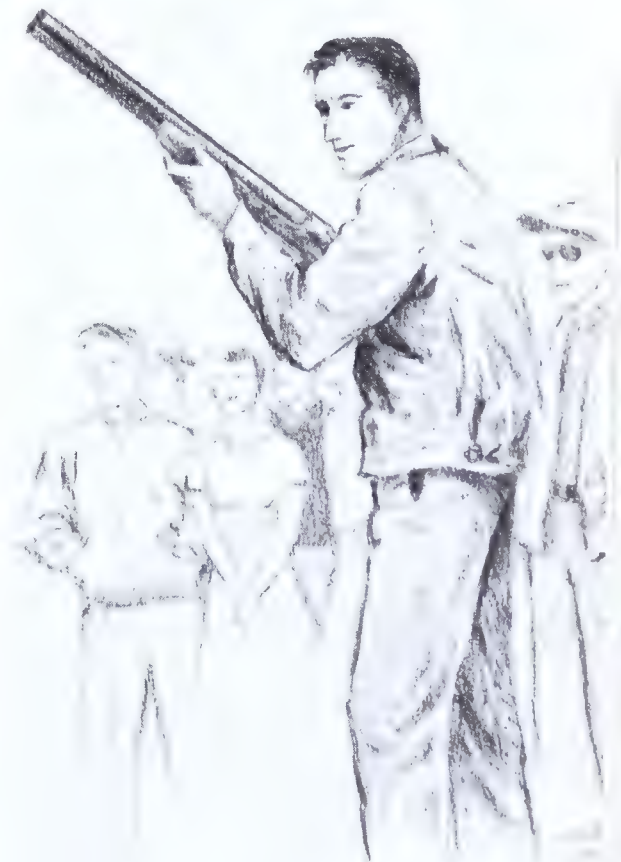
There was absolutely none of that at the Hegins event; we specifically watched for it. As stated before, the Hegins Shoot is held under Hurlingham rules. Rule No. 13 states, "The mutilation of birds is prohibited. Any contestant who violates this rule, or connives at its violation, shall forfeit all rights in the contest." The eagle-eyed, experienced, paid referees enforce all the rules.

As unobtrusively as possible, par-

ticipants and spectators were interviewed to obtain a roundup of sentiment on the cruelty question. It went something like this: Individuals, institutions, municipalities, the State itself—all, at one time or another, conduct campaigns to exterminate property defacing pigeons. Poisons, traps, electricity and what-not have been employed. This doesn't seem to excite anyone.

Farmers, sometimes, to avoid contamination of stored grains will invite kids to trap pigeons from their barns. The kids can earn some small change selling these birds for shoots. (This past season two separate farmers who permitted us to hunt small-game asked us to "shoot those blankety-blank pigeons.")

The pigeons used at Hegins were by no means wasted. There was an all-day procession of people carrying



15-lb., paper potato bags. On investigation (reporters are noseys; aren't they?), the bags were found to be full of pigeons. The going price was 75 cents per dozen; 65 cents in lots of 100. One person bought 70 dozens!

Incidentally, my dear old mother always liked to eat squabs; so, we figured, these pigeons wouldn't be too much different. Mom was to get a treat. Never again! Those birds have more feathers each than a brace of ducks. Besides, as mother could have told me, those birds, unlike squab, require an awful lot of stewing.

In any event, there wasn't much waste at this tournament. Most of the 4,500 to 4,800 birds used were apparently destined for local stewpots.



The Coleman Shoot is unique in that it's a sort of community project. The Hegins Labor Day Committee manages and operates the entire affair on volunteer labor. For instance, a local electrician will give a day or two to set up all lights, speakers, etc. Housewives prepare and dispense good, hot meals. The prices are more than reasonable. Men, boys, girls—they're all busy at various stands.

Various town organizations are represented on the association. The project has paid for, improved and maintained the community park and grove. The grove includes a bandshell and stage. The ball field, on which the Coleman shoot is held, is one which any community would be proud to own. It's in tip-top shape and large enough to accommodate several ball games.

In addition to the park and grove, the project has benefited other community projects. The local fire company, for instance, has received sizable contributions for equipment from the association.

In watching the shooters, especially the local shooters, the thought occurred to me that regardless of all other factors, wildlife conservation benefits in areas where these flyer shoots are traditional events. Why? It's simple. The breed of shooters developed in these areas are not likely to leave wounded game laying around. They don't miss often!

NO SUNDAY HUNTING FOR WOODCHUCKS OR RACCOONS

The woodchuck (groundhog) is classified in Pennsylvania as a game animal. The Game Laws specify that no game bird or animal may be hunted in the Commonwealth on Sunday.

This information is repeated as a service to persons who claim, after being apprehended, they did not know that hunting chuck on the Sabbath is unlawful.

In Pennsylvania the raccoon is another game animal on which there is presently no close season but on which, also, the law forbids Sunday hunting.



The Flatcoat Challenge

By Herm David

EVENTS of import often have very small beginnings.

For example: The Air Force sergeant's bride wanted to bring something of England with her to her new home in Kankakee, Illinois. What better choice for a girl who'd known and loved dogs all her life than a puppy of the breed she knew best? So it was that Ed and Dorothy Moroff set about to find a flat-coated retriever small enough to fit into the very limited space that would be available on their trans-Atlantic trip. They settled upon a black bundle of fur with the imposing name, Rab of Morinda. Neither Ed nor Stella knew then that flatcoats were almost nonexistent in the United States. That

was one beginning—now Rab is writing new breed history.

Another, even more unlikely beginning: Ten years ago someone gave a black puppy to Cleveland, Ohio, businessman Homer W. Downing. Because the puppy needed obedience training, Downing became interested in obedience work. He thought his King was a flatcoat—but he couldn't be sure because he'd never seen one. The more he checked trying to find out, the more he became interested in flatcoats—and the more he became amazed that he couldn't find any record of a single dog of the breed in the United States. He received permission from the AKC to campaign his King in obedience trials, but he withdrew the dog from competition when his investigations revealed that King was sired by a Labrador and whelped by a golden retriever.

That left Downing with an abiding interest in obedience work and

HERM DAVID is publications director for the National Red Setter Field Trial Club but has been closely associated with all breeds of sporting dogs for many years.



OWNERS AND HANDLERS of flatcoat retrievers display their dogs at the Western Reserve show. Left to right: Mrs. Dorothy Foster, Cleveland; Mrs. Marian Ratcliff, Toledo; Mrs. Ed Moroff, Kankakee; Ed Moroff; Homer Downing, Cleveland; Miss Ronny Eagan and her father, Bob Eagan, Rocky River, Ohio.

a growing interest in flatcoats—but no dog eligible for competition. Downing decided he would get himself an honest-to-goodness flatcoat. He had to go to England to do it for there were none in the United States—with no new breedings they'd just disappeared during the war. Downing studied the breed to make sure he'd be getting something worth importing. The more he learned of flatcoats, the more his interest grew.

He learned that forty-five years ago flatcoats were the most popular of all the retriever breeds in England—until a very wealthy man set out to get a corner on all of the good ones. He didn't want to do anything with them—he just wanted to own them. He didn't create, he just absorbed. The inevitable result was stagnation for the flatcoats. Other good retriever breeds began to replace them as winners at the field trials. Downing discovered that, while the flatcoats were a nearly-forgotten item in the United States, they still enjoyed a considerable popularity in England. After considerable correspondence he imported Pewcroft Perfect (Doc) and Atherbram Stella, a rare liver-colored puppy. Both have been making breed history in the United States.

Stan Strucel of Milwaukee, a professional retriever trainer, felt that he had to satisfy his curiosity about the missing-in-America breed of retrievers—so he imported Wrottesley Lad and Nesfield Miss Ulster.

In Toledo, Ohio, F. Ken Ratcliff became intrigued by an English magazine's article on flatcoats and, a year ago, he imported Claverdon Bella Donna. Dr. I. T. Hoen of Cedarhurst, Long Island imported a flatcoat and Mr. Walwynn of Toronto imported Trigger of Riverford.

The Moroffs imported Jet of Lilling as Rab's successes heightened their interest in the breed. Then, last year Stella whelped a litter of seven of Doc's puppies—the first flatcoats whelped in the United States in 12 years. A month or two later Strucel's Miss Ulster increased the flatcoat population by more than one-third when she whelped six puppies. Add them all up and you find that the total North American count of flatcoats is only 22. That's less than one out of every million in our dog population.

But rarity is small recommendation for any breed. Have these flatcoats rewarded their enthusiastic owners? Let's look at the record.

Rab promises to carry his breed back to popularity afield with his trial successes. As a puppy he had the one advantage any retriever needs if he is to develop properly—water. A large farm and the Kankakee river became his delight and his playground. Dorothy Moroff knew she had a real prospect in Rab and she encouraged her husband to enter him in nearby field trials. Some of the judges Rab ran under had never seen a flatcoat—but they knew a good retriever when they saw him and Rab started to win. As a puppy he was winning derby stakes. He continued to win and Ed Moroff decided he de-

served professional training if he was going to have to compete against professionally trained dogs. So it was that Rab went to Ray Sommers at Random Lake, Wisconsin. At this writing the 30-month-old Rab has already accumulated four firsts, eight seconds, two thirds, three fourth places and two certificates of merit in tough, breed-open competition afield.

This writer has checked with two prominent professional retriever trainers who have competed against Rab. They both stated that, age considered, Rab is an outstanding retriever. That's the same puppy that was selected back in England because

RAB OF MORINDA displays championship form in retrieving. He has been winning in field trials ever since he was a puppy. This flatcoat retriever is owned by Ed and Dorothy Moroff of Kankakee, Illinois.



he was small enough to fit into the bride's handbag.

Doc's contributions have also been outstanding—but in a different area of competition. Doc has been a "hot" performer in the obedience ring. Last year he went just as far as a dog can go in AKC obedience trials. He won the "utility dog" and the "tracking dog" titles—and he did it with nearly perfect scores. Stella has done nearly as well. She now holds the obedience title, "companion dog excellent."

Doc also promises to become the first flatcoat to win an American bench championship since the war years. He now has six of the required 15 points—a considerable accomplishment since it is almost necessary for a dog to have some of his own kind available to compete against.

The quiet-spoken and mild-mannered Downing has assumed the responsibility of unifying the flatcoat's revival. He isn't saying how high his telephone tolls and his bills for overseas airmail have been running, nor what its costing him to circulate a quarterly publication he calls "*Flatcoat Filings*," but his interest in the breed makes such labors a real pleasure and the expenses easier to bear.

Downing has a regular system that keeps him advised of each new flat-

OBEDIENCE TRAINING is an important part in the successful handling of any dog. Flatcoat retrievers take to their lessons as readily as they take to water. Here Mrs. Homer Downing, of Cleveland, shows how well "Stella" has learned a lesson.



coat importation. The English fanciers of the breed have a club, the members of which send Downing full information on every dog they export to the United States. His circulation is complete.

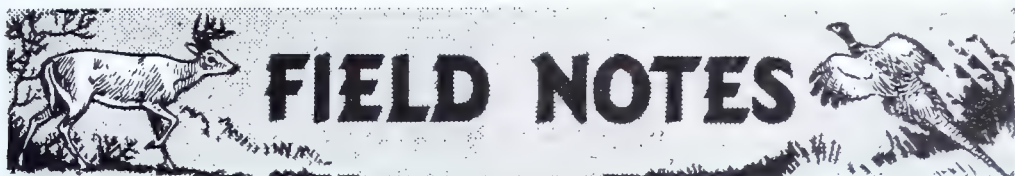
So that flatcoat owners might get acquainted with each other, Downing arranged for them to meet at the recent Western Reserve bench show. Eight flatcoats were entered—and that's about seven more than anyone's seen in an American show ring in 20 years. Doc and Ratcliff's Bella Donna were the big bench winners, but—far more important—many firm friendships were formed. The folks found enjoyment and excitement in sharing the challenge of building their breed back to a worthy position among American sporting dogs.

They certainly have an admirable start. Only on flatcoat, Rab, has had an opportunity at field trials and he's turned out to be something of a hot pistol. Two flatcoats, Doc and Stella, have had opportunities at obedience competition—and they have proven themselves stars. In functional competition the flatcoats are batting one-thousand!

Joined by the owners of the new puppies, the breed's original post-war pioneers are looking forward to a popularity for the breed comparable to that it enjoyed 45 years ago. Nine of the 13 puppies are in field training now. Several are also receiving obedience training.

This writer talked with all of the flatcoat fanciers present at the Western Reserve gathering and he was impressed by the pleasure they were deriving from their canine adventure—and by their determination that they will keep their breed in the hands of sportsmen and away from profiteers and operators of puppy factories.

More importations and more careful breedings are planned. Folks who have a sincere interest are invited to write Downing at 1397 Clearview Road, Cleveland 21, Ohio.



In This Corner

ERIE COUNTY—Recently while on a routine patrol I noticed a hen and a cock pheasant acting rather strangely in a low clover field. The birds were jumping up and down and seemed to be fighting something. I sneaked down an old hedgerow adjacent to the field and studying the affair with binoculars I found that the pair of pheasants were actually fighting a good-sized woodchuck. The game birds would jump in and fly in and give old “chuck” a peck on the back and the cock bird was also making use of his spurs. After a few minutes of battle the woodchuck apparently got his fill of it and he took refuge in his freshly dug burrow. I moved in closer to investigate further and found Mr. and Mrs. Pheasant had a nice brood of chicks which apparently they were more than ready and willing to protect.—District Game Protector Roger J. Wolz, Erie.

White Sheep

YORK COUNTY—A pair of gray squirrels had a litter of young in a false chimney at the residence of Clyde Fogle on First Avenue, Red Lion, Pa. When they were old enough to move around, the residents in the block were amused to see one of the young was an albino. Then one day, the parents moved the young to Fairmount Park, Red Lion, Pa.,—all but the white one. The albino was deserted and finally coming off the roof alone fell prey to a dog. It is not known the reason for the abandonment except the off-color was not acceptable to the parents.—District Game Protector Daniel Fackler, Windsor.

Looks Sometimes Are Deceiving

ERIE COUNTY—Many times hunters are blamed for things they do not do. This past June I received a report that a woodchuck hunter had shot a steer in a farmer's pasture. There was a hole in the animal's neck and a front shoulder was broken. It certainly looked like the steer had been shot. Upon investigation I found that the animal was pastured far from a road and in an area not likely to be frequented by woodchuck hunters. There is a slashing in the pasture where an animal could easily sustain injury. The carcass was skinned and the injured area examined closely. There was definite evidence that a bullet had not caused the injury and it was determined that the steer had run into a sharp object that punctured the hide and fractured the shoulder. If the real cause of the loss of the animal had not been determined bad publicity could have influenced many farmers in the area to post their land against hunting.—District Game Protector Elmer Simpson, Union City.





Pheasants For Freedom

LUZERNE COUNTY—Three broken windows and several excited Kingston residents are all that remain to remind bird lovers that pheasants love their freedom.

Two families that live in second floor apartments were startled the other day when they heard the crash of a breaking window in a garage.

Upon investigation of the son of one of the families a pheasant was found in the garage, unconscious. A neighbor took the pheasant to his garage and placed the bird in a basket, and notified me to come and pick up the bird, but a few minutes later after I was called two more crashes were heard. The pheasant it seems, awoke and got out of the basket and broke two more garage windows and when last seen was heading toward the river to its happy home.—District Game Protector Edward R. Gdosky, Dallas.

Non-Stop Flight

NORTHAMPTON COUNTY—A deer recently passed thru the Boro of Roseto without making any detours or stopping to check sights as it went thru. The deer came down an alley straight across the main street thru a large plate glass window between two rows of sewing machines in a dress factory, out the rear window and dis-

appeared. The clean-up man was the only person in the factory at the time and he was too amazed to give a detailed description of what happened or the sex of the deer. When it left the factory it jumped through a window. After dropping from a height of 20 ft. and landing on a macadam driveway, it jumped up and left the scene immediately, apparently uninjured.—District Game Protector H. W. Wiggins, Nazareth.

Any Pig In A Storm

LEBANON COUNTY—Mr. Harold Dietrich who has a large farm at Sheridan, Pa., and raises hogs and chickens has had considerable trouble with raccoons killing his chickens in the past few years; therefore he destroys raccoons he finds around his buildings. On May 22, 1958, he killed a female raccoon at one of his buildings. On May 26 his wife was checking on his hogs and found a young raccoon nursing on a sow that had farrowed a litter of pigs.

On May 24, 1958 Mr. Carl Loser, Rexmont, Pa. found a dead Chimney Swift near Myerstown, Pa. that had a leg band of U. S. Fish & Wildlife Service, Washington, D.C. The records revealed that this Chimney Swift was banded at Hildage County Courthouse, Edinburg, Texas on April 23, 1956 by Dr. Pauline James.—District Game Protector E. J. Turner, Mt. Gretna.



Plovers Out of the Past

PERRY COUNTY—On June 3 while examining different food plots with Land Manager Holtzapple, and traveling on route 274 to the West of New Germantown, we noticed a couple of young birds along the highway. Mr. Holtzapple remarked to me that these were the first young pheasants that he had seen this season and I said that they were the first that I had seen too. But something about them did not seem right so I stopped and backed up. About that time the old bird went into a song and dance that wasn't at all becoming to a pheasant and when they came out of the grass we saw at once that they were not pheasants at all but a brood of young upland plover, a bird that was once a favorite target of our grandfathers but now are a rare sight indeed. Very few of us are privileged to see them in this section of the country any more.—District Game Protector Russell Meyer, Blain.

Out of the Frying Pan

NORTHWEST DIVISION—Quite often a Game Protector and his Deputies are called upon to do extra curricular work in the interest of wildlife, but frequently their wives end up doing the work. Such was the case recently when Byron Hanby of Knox R.D. mowed into a nest of ringneck eggs. He immediately notified Deputy George Hartzell who in turn came to me for advice. A broody hen just couldn't be found so Mrs. Hartzell came up with a solution. She had received an electric fry pan for Christmas and figured with the thermostat control properly adjusted, who needed a hen for hatching. We are anxiously awaiting to see if we come up with a pan full of chicks or some well fried ringneck eggs. Regardless of the outcome, I believe we can claim a first on this venture.—Land Manager Donald M. Schake, R.D. No. 1, Knox.

*DO YOU BELIEVE THAT STUFF
ABOUT A POLKA-DOT CROW ?*



LACKAWANNA COUNTY—While talking with Bill Hepburn of R.D. 1, Dalton, one day he told me that early one morning this spring his ten year old daughter came running into the house and said, "Daddy, there's a white crow in the field." Bill stepped out of the house and sure enough there was a white crow feeding peaceably with six or seven of the normal black variety. Bill took his scope equipped .222 rifle, drew a bead of Mr. Crow and brought him down. Closer examination showed that the crow was not a pure albino, its plumage showed what might be described as a Polka Dot effect, mottled brown and white. It had a brown beak and brown legs. Naturally, Bill is having the crow mounted.—District Game Protector Stephen A. Kish, Avoca.

Special Delivery Ducklings

YORK COUNTY—A wild mallard duck built a nest in a rhododendron bush in my back yard. Curious, I checked the nest periodically to count the number of eggs. When I would approach her nest, she would fly off. But by late April when the incubation period was drawing to a close, I could walk up to the nest and she did not fly off. Again curious, I kept a close watch to see whether or not she would leave for food and drink.

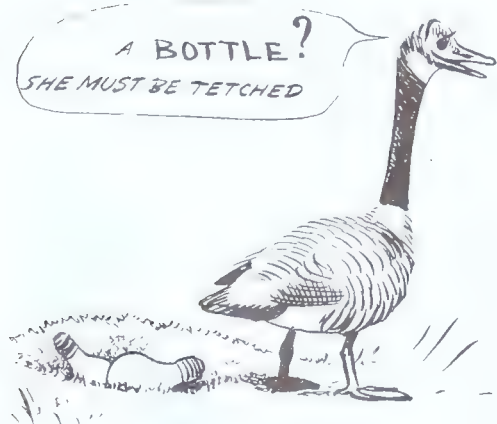
Sure enough she didn't, so, being a game protector and attempting to live up to the name, I shelled corn off of the cob and held it in my hand. She shoveled it up setting on her eggs. I guess I will have to feed mother until her eggs are hatched.—District Game Protector G. K. Kirkpatrick, York.

Where Do Goslings Come From

MONTGOMERY COUNTY—During the month of May, a sportsman living in Mount Clare, William C. Blatt, Jr. was wading the Schuylkill River behind his home. In this immediate vicinity there are usually a flock of Canadian Geese which number between 60 and 80. They make this part of the river their home and also raise their young on the many small islands in the river. Mr. Blatt went up on this one island and saw a female goose lying on a nest. He walked up to her and as he got about 10 feet away she stood up and started to hiss like they do. He looked in the nest and saw that she was incubating two goose eggs and a large glass bottle. It was so interesting that Mr. Blatt took a picture of this and sent it to me. As Mr. Blatt said, "We all know that young geese come from eggs but evidently the geese themselves were not told about this."—District Game Protector E. W. Shaver, Mainland.



FAYETTE COUNTY—This story was related to me by Deputy Paul Miller of Mill Run. On June 3, 1958, while working in his garden along Mill Run Creek in Mill Run, Lucian Prinkey heard a commotion uncommon to him. He grabbed his fork and investigated. He surprisingly witnessed a blacksnake and a female grouse battle for possession of 13 grouse eggs in a nest nearby. This was a little too much for Mr. Prinkey. The blacksnake retreated into some rocks with a few scars on his back for his efforts. The nest was under surveillance by Mr. Prinkey until the eggs were hatched. The final tally was 11 grouse chicks and two unhatched eggs.—District Game Protector A. J. Ziros, Connellsville.



Full House

LANCASTER COUNTY—During the month, I picked up two of the largest pheasant nests I have ever found since I started as a Protector. One had forty eggs and the other was even larger. It contained fifty-seven eggs. I sure would like to know how many hens were laying in these nests.—District Game Protector J. P. Eicholtz, Strasburg.



Pennsylvania's Modern Johnny Appleseed

By Paul M. Felton

A MODERN Johnny Appleseed is stalking Penn's Woods today and he's not a Ghost! When you gun for turkey and deer around the Sullivan-Lycoming County Line this Fall you will be in his area. Look for his work.

If you recall, the original Johnny sowed apple seeds in the wilderness from Pennsylvania's Wyoming Valley to the Muskingum Valley of Ohio. His idea was to provide fruit orchards for the settlers who were migrating westward after the Civil War.

For the past 10 years a modern version of this fabled character has

carried on the same practice, using Chinese Chestnuts in place of appleseeds. Our modern Johnny is Harvey Nyce, sportsman from Lansdale, Montgomery County. Harvey is literally following in the original Johnny's footsteps.

Every year when Harvey heads for his favorite deer and turkey haunts around English Center and the Dutch Mountain area, he packs a couple of quarts of Chinese Chestnuts along with his guns. Most men might be tempted to eat these delicious nuts but not Harvey. He considers them

more valuable for game food. To put it in his own words "The Chinese Chestnut tree can add a tremendous food supply to our forest game."

Older readers will remember when the native American Chestnut trees provided Fall crops of mouthwatering nuts. Forest game such as squirrel, deer, turkey and practically every other animal and bird throughout the woodland area of Pennsylvania feasted on this rich food. In those days, one out of every three trees was a chestnut.

When Johnny Appleseed trudged barefoot from Wyoming Valley west to the Alleghenies in the Fall of 1797, he lived off the country as he travelled. More than likely many of his camp fires popped with roasting chestnuts, then plentiful. He could not know that 150 years hence nature's bountiful crop of sweet nuts would join the Heath Hen and Passenger Pigeon into oblivion.

Yet, in 1904, the killing chestnut blight started to strangle this common tree. In a short 30 years the important food supply all but disappeared. Game had to look elsewhere for a substitute for the chestnut.

A bright note in the American Chestnut's decline was the introduction of blight-resistant strains of Chinese Chestnuts into Eastern United States. These were imported from the Orient by plant explorers and were found to be well adapted to our climatic conditions.

Propagation and distribution of seed of this new chestnut was carried on energetically by the United States Department of Agriculture from the Beltsville, Maryland station. A great many of these nuts managed to land in the vicinity of Harvey Nyce and his neighborhood where they were planted and prospered. Harvey, harking back to the chestnut gathering days of his youth near Schwenksville was attracted to the newcomer. Before long he had Chinese Chestnut trees planted in his back yard, and

every other back yard he could invade. For a few years he was satisfied to spread the word about the new chestnut to the local folks. Then, however, it occurred to him that his effort might better be expended in planting tiny orchards deep in the woods where he hunted big game and noticed a lack of food.

It was at this time that Harvey turned into Johnny Appleseed. Here in his own words are 10 years of experience in Appleseeding:

"Long ago I got the habit of filling my pockets with chestnuts before starting out on a morning's hunt. When I was a kid I used to nibble on them throughout the day; now I plant them all." "All day while hunting, I keep on the lookout for likely looking planting spots for my midget orchards." "Chestnut trees need light to grow well so I keep alert for an opening in the forest canopy where a tree or two are blown down and the sun can get in. There I go into action. Like the original Johnny Appleseed I know that game especially deer will play hob with young tree sprouts. To get around this I always brush or fallen tree tops with spiky branches will ward off white-tails. This gives the young trees a chance to get their heads up above convenient browsing heights."

"A good site located, I kick a hole in the soft humus with my heel; place a chestnut in the depression and scuff the dirt and litter back over the nut with a brushing movement of the foot."

"Like apple trees, chestnuts need other chestnut trees close by to cross pollinate the flowers and set a good nut crop. For this reason I usually plant a small orchard of four to six nuts spaced 10 to 30 feet apart and placed to take advantage of any protective cover."

Harvey modestly admits that he has no idea how many small orchards of Chinese Chestnuts he has planted. One thing he is sure of; that he gets

a big kick out of planting the nuts, knowing that his favorite gunning haunts will be enriched in a few years when those trees reach bearing size.

To help you in choosing the proper food for your favorite quarry, here is a list of animals and some of the food trees that tickle their palates:

	Apple	Chinese Chestnuts	Juneberry	Persimmon	Walnut	Osage Orange
Bear	X	X	X	X		
Deer	X	X	X	X		
Turkey	X	X	X	X		X
Grouse	X	X	X	X		X
Squirrel	X	X	X	X	X	X

Next meeting night, just for the fun of it, have the boys kick around the whole subject of appleseeding for deep forest game. You could start a Statewide movement to provide automatic feed trees for non-farm game.

Just about any native fruit or nut will be welcomed by wildlife but the ones noted here were picked because they are easy to find almost anywhere. Aside from utilitarian reasons, seed collecting is a dandy excuse to get out and view the Fall color found at seed time.

Why not follow the example of our modern Johnny Appleseed when you go hunting this year? Take a pocket-full of seeds or nuts and plant a woodland food orchard for the game? If you do, Harvey Nyce guarantees that you'll experience a deep satisfaction. The same satisfaction that kept the original Johnny Appleseed planting seeds and trees for half a century.

HOW MANY GAME FOODS can you recognize in this photo? Front row, left to right: Black walnuts with and without husks; Chinese Chestnuts with an without burrs; persimmons. Back row, left to right: Osage Orange; hickory nuts, dogwood seed; and apples, both fruit and seed.





Price Tag On Penn's Woods?

By John E. Guilday

WHEN you get the shotgun down, whistle up the dog, and step into the Pennsylvania woods you step into something more than just a patch of potential mine props or paper pulp—you step into the heart of Pennsylvania itself.

For all of its belching mills and great flexing of industrial muscles, its power and potentialities, there are places, many places, in Penn's woods where a man can spend a few hours, or days, or weeks, where the world can't get at him. It's not that the world's such a terrible place. It's just that it's a pretty nice feeling to have a brook trout hooked and jumping in white water, or a few squirrel tails hanging out your hunting jacket, to breathe real air, to step into a world where values are simple and unfettered. Here is a place where we don't need a down payment on the blue and white of the sky, where we aren't pounded by a five minute commercial on "after thirty-five" before we can listen to the drum of a grouse or the gobble of a wild turkey. Here is a place where things become reduced to their simplest terms and any man is on common ground with any other.

Has this woodland always offered a haven? Will it always? The answer

NED
SMITH

to the first question is a qualified yes. The answer to the second is up to you.

It is not hard to visualize the eastern forests as they were before the time of the broad ax—one unbroken canopy of trees threaded through by pristine rivers and thrown into convulsive green folds, the Appalachians, the “Endless Mountains” of the Indians. One whispering sea of trees, it began within earshot of the surf on the sands of New Jersey, and stretched westward for over six hundred miles, to end in the prairie groves of the Illinois country. North and south this huge temperate forest arose in the alligator haunted swamplands of the Gulf coast and sprawled up the Appalachians over sixteen full degrees of latitude, there to grudgingly give way to spired Canadian spruces.

This forest was another world, a world primitive and strange, and dangerous, to men who were used to the cobblestones of London or the familiar fields of Europe. Yet here they came in ever increasing numbers, searching for simplicity.

It is hard to make a good fight when the enemy can't be seen. Intolerance, poverty, over population, prejudice, lack of opportunity, these are all elusive but crushing foes. One might as well have become a Don Quixote and slashed out at windmills as to have tried to forge a path through the accumulated complexities of medieval Europe. But here in this new world was an enemy one could see and strike out at and hope to vanquish—a foe dangerous but easily defined. It did not have to be changed, it need but be destroyed. Here was something a man could set his hand to and see it fall, and it came to earth in a shower of flying bark to the ring of the ax and the crack of the musket. Even in those dangerous days the forest held out simple values.



Today the forest is tamed. The last wolf pups were whelped over fifty years ago. The last panther skin was nailed to a smokehouse wall twenty-five years before that. The forest is now a crop, fragmented by roads and permitted to remain in areas where it is economically desirable. But it is something more than just a crop, something more than just “undeveloped land.” The value of Penn’s woods cannot be rung up on a till.

This technical civilization of ours is growing at an ever increasing rate. The individual part grows smaller and we must hasten ever faster to keep our seats on the modern merry-go-round. But no matter how complicated life becomes we can always step out along some forest path into a world unhurried and unimpressed by our frenzy.

In a sense the forest has become a refuge for man as well as for wildlife. A place where trout bite and bacon sizzles, where pinetops bend with the wind and grouse explode with a whirr, a place where coffee bubbles on a campstove, where heels get sore, and cold rain dribbles down the back of the neck, where moss piles deep and snow creaks underfoot and beards grow ragged. A world of simple values, it is well worth preserving.



CONSERVATION NEWS

1958 WATERFOWL SEASONS ANNOUNCED BY COMMISSION; HUNTING PERIOD FOR DUCKS, GEESE 10 DAYS SHORTER

The Pennsylvania Game Commission has announced seasons and bag limits for the hunting of wild waterfowl, coots and Wilson's snipe as declared by the U. S. Fish and Wildlife Service.

This fall the duck, geese, coot and brant seasons will be open for 60 consecutive days, 10 days less than the seasons for the past two years. The dates are: October 15 to December 13, inclusive. The shorter season reflects concern by the Federal agency over a decrease in waterfowl populations as indicated by a lower breeding population and hatch of young birds on the northern breeding grounds last spring and summer.

The over-all bag limits—4 ducks per day with a possession limit of 8; 2 geese per day with a possession limit of 4—remain the same, however, as they have been during recent years. Only one (1) wood duck may be bagged in a day, with a possession limit during the season of two (2). The bag limits for ducks, however, are marked by one important change this year. The daily bag during the 1958 season may not include more than two (2) birds of the canvasback or redhead species. This means that a hunter can legally bag two (2) canvasbacks or two (2) redheads or one (1) of each species. The possession limit after the second day of the season may not aggregate more than four (4) birds of these two species.

Pennsylvania shooting hours for all waterfowl in the coming seasons are one-half hour before sunrise to sun-

set, except for October 25th only when the opening hour will be 8:00 a.m., Eastern Standard Time. Hunters are reminded, however, that mourning doves may not be legally taken or shot at, even on this day, prior to 12 o'clock noon, Eastern Standard Time.

In the counties of Bucks, Philadelphia and Delaware and on the Delaware River bordering on such counties between Pennsylvania and New Jersey, the season for waterfowl (ducks, geese, brant and coot) will open November 10, 1958 and close January 8, 1959.

Waterfowl hunters in this state are required to purchase both a Pennsylvania hunting license and a Federal migratory bird hunting stamp (available at most post offices). The federal stamp (which will still cost only \$2.00 for this season, the recent increase approved by Congress not taking effect until July 1, 1959) is not required in the hunting of sora, rails, gallinules, woodcock, Wilson's snipe or jacksnipe, or doves.

Federal regulations prohibit the use of any shotgun capable of holding more than three (3) shells, including semi-automatic and hand operated repeating shotguns. The shotgun plug must be incapable of removal without disassembling the gun. Shotguns used in taking any migratory fowl may not be larger than 10 gauge. Rifles may not be used in taking migratory game birds, but such birds may be taken through the use of bow and arrow.

SPECIES	OPEN SEASONS FIRST DAY	LAST DAY	DAILY BAG LIMITS	MAXIMUM POSSESSION LIMITS	LEGAL SHOOTING DAYS AND HOURS (SUNDAYS EXCEPTED) <i>Unlawful to hunt for any wild bird or animal, including migratory game, on October 25, 1958 prior to 8:00 A.M., EST.</i>
Sora	Sept. 1	Nov. 8	25	25	Sept. 1 to Nov. 8 1/2 hr. before sunrise to sunset
Rails (except Sora); Gallinules	Sept. 1	Nov. 8	15	30	Sept. 1 to Nov. 8 1/2 hr. before sunrise to sunset
Woodcock	Oct. 15	Nov. 22	4	8	Oct. 15 to Nov. 22 1/2 hr. before sunrise to sunset
Wilson's or Jacksnipe	Oct. 15	Nov. 13	8	8	Oct. 15 to Nov. 13 1/2 hr. before sunrise to sunset
Doves	Sept. 1	Nov. 4	10	20	Sept. 1 to Nov. 4 12:00 o'clock Noon to sunset

NO FEDERAL STAMP REQUIRED TO HUNT SORA, RAILS, GALLINULES, WOODCOCK, JACKSNIPe AND DOVES; STAMP REQUIRED TO HUNT DUCKS, GEESE, COOTS, AND BRANT.

Ducks (Daily bag limit may include 1 wood duck; possession limit 2.) (Daily bag and possession limits may include 1 hooded merganser.) (Daily bag limit may not include more than 2 canvasbacks or 2 redheads, or 1 canvasback and 1 redhead; possession limit may not include more than 4 canvasbacks, or 4 redheads; or 4 in the aggregate of both canvasbacks and redheads.) Mergansers (American and Red-breasted)	Oct. 15	Dec. 13	4	8	Oct. 15 to Dec. 13 Oct. 25 only 1/2 hr. before sunrise to sunset 8:00 A.M. to sunset
Geese (except Snow)	Oct. 15	Dec. 13	5	10	(not to be counted in daily bag and possession limits on other ducks)
Coots	Oct. 15	Dec. 13	2**	4**	
Brant	Oct. 15	Dec. 13	10	10	
	Oct. 15	Dec. 13	6	6	

NOTE:

The season for waterfowl in the Counties of Bucks, Philadelphia and Delaware, and on the Delaware River bordering such counties, shall be November 10, 1958 to January 8, 1959.

The season for Wilson's or Jacksnipe in the Counties of Bucks, Philadelphia and Delaware shall be November 10, 1958 to December 9, 1958.

MIGRATORY BIRD HUNTING METHODS

Permitted: Bow and arrow, or shotgun not larger than 10-gauge, fired from shoulder (including hand-operated and semi-automatic repeating shotgun of not more than 3-shell capacity, which must be plugged to 3 shots so that plug cannot be removed without disassembling the gun); dog; blind; boat propelled by hand; floating device other than sinkbox; artificial waterfowl decoys. Injured or dead waterfowl may be picked up by means of a motorboat; sailboat or other craft. Shooting is permitted from a boat or other craft having a motor attached if such craft is fastened within or tied immediately alongside of any type of stationary hunting blind.

Prohibited: Use of electrical devices or recordings in taking migratory game birds; all rifles; live bird decoys; automobile; aircraft; sinkbox (battery); power boat, sailboat, or any device towed by power boat or sailboat; Waterfowl, coot, gallinules and doves may not be taken under any circumstances by the aid of salt, or shelled or shucked or unshucked corn, wheat, or other grains, or other feed or means of feeding similarly used to lure, attract, or entice such birds to, on, or over the area where hunters are attempting to take them. As used herein the terms "salt" or shelled or shucked or unshucked corn, wheat, or other grains," or "other feed or means of feeding similarly used," shall not be construed as including salt

blocks, properly shocked grain, standing crops (including aquatics), flooded standing crops, flooded harvested crop lands, or, in connection with the hunting of waterfowl, coots and gallinules, grains found scattered solely as a result of normal agricultural practices, or, in connection with the hunting of doves, grains found scattered solely as a result of normal agricultural harvesting. Waterfowl may not be hunted by means, aid or use of cattle, horses or mules and no motor-driven land, water or air conveyance or sailboat may be used to concentrate, drive, rally or stir up waterfowl or coots.

FEDERAL STAMP FOR MIGRATORY BIRD HUNTING

It is unlawful for a person over the age of 16 years to take migratory waterfowl unless he carries on his person an unexpired Federal Migratory Bird-hunting Stamp, validated by his signature written in ink across its face. Not valid after June 30 following date of issue. This stamp is not required to hunt Sora, Rails, Gallinules, Woodcock, Wilson's or Jacksnipe and Doves.

** Not more than 2 geese of any kind (except Snow Geese) in a straight or mixed bag a day, or 4 singly or in the aggregate in possession.

NO OPEN SEASON—SNOW GEESE AND SWANS.

Pennsylvania Official 1958 Open Seasons and Bag Limits

(Regulations apply for Hunting License Year, September 1, 1958 to August 31, 1959)

Open season includes first and last dates listed, Sundays excepted, for game. The opening hour for small game, migratory game birds and other wild birds or animals on October 25 will be 8:00 A. M., EST. On other opening days, and otherwise during the season for upland and big game, the shooting hours daily are from 7:00 A. M. to 5:00 P. M., EST, excepting from July 1 to September 30 inclusive, 6:00 A. M. to 7:30 P. M., EST, and the hours for the October archers' deer season, which are 6:00 A. M. to 5:30 P. M., EST.

UPLAND GAME (Small game possession limits below)	BAG LIMITS		OPEN SEASONS	
	Day	Season	First Day	Last Day
Ruffed Grouse	2	8	Oct. 25	Nov. 29
Wild Turkeys	1	1	Oct. 25	Nov. 22
Squirrels, Gray, Black & Fox (combined)	6	30	Oct. 25	Nov. 29
Ring-necked Pheasants, males only	2	8	Oct. 25	Nov. 29
Rabbits, Cottontail	4	20	Oct. 25	Nov. 29 and
Rabbits, Cottontail .. (not more than 20 in combined seasons)			Dec. 27	Jan. 3, 1959
Bobwhite Quail	4	12	Oct. 25	Nov. 29
Hares (Snowshoe Rabbits)	2	6	Dec. 27	Jan. 3, 1959
Raccoons (hunting or trapping)	Unlimited		Sept. 1	Aug. 31, 1959
Woodchucks (Groundhogs)	Unlimited		Sept. 1	Aug. 31, 1959
Grackles	Unlimited		Sept. 1	Aug. 31, 1959
Squirrels, Red (closed October 1 to 24, incl.)	Unlimited		All mos. (exc. Oct. 1-24)	
Bears, over one year old, by individual	1	1	Nov. 24	Nov. 29
Bears, as above, by hunting party of three or more	2	2	Nov. 24	Nov. 29

DEER:	Bow and Arrow Season—Either sex, regardless of size. (Requires Hunting License and Archery License, but no Antlerless Deer License)		(only one deer for combined seasons)	Oct. 4	Oct. 24
	ANTLERED DEER—Regular Season—Male with two or more points to one antler: Provided, a male deer with an antler three or more inches long without points, measuring from the top of the skull as the deer is in life, shall be considered legal, by individual		1	1	
	ANTLERLESS DEER SEASON—(Requires Hunting License and Antlerless Deer License), by individual			Dec. 1	Dec. 13
				Dec. 15, 16 and 17	

NO OPEN SEASON—Hungarian Partridges, Hen Pheasants, Sharp-tailed Grouse, Cub Bears, Elk, Otters.

FURBEARERS:

Skunks and Opossums	Unlimited	Sept. 1	Aug. 31, 1959
Minks	Unlimited	Nov. 22	Jan. 17, 1959
Muskrats (traps only)	Unlimited	Nov. 22	Jan. 17, 1959
Beavers (traps only) state-wide	5	Feb. 14	Mar. 21, 1959

SPECIAL REGULATIONS

POSSESSION AND TRANSPORTATION LIMITS of legally-killed small game shall mean not more than the daily limit for the first day nor more than an accumulated total for each succeeding day of the open season for each species; but not in excess of the season limit, regardless of where held, stored or found in possession.

DEER—Even though there are three separate seasons for taking deer, a hunter may not kill more than one deer during the three combined 1958 seasons, whether hunting individually or with a camp or hunting party. An Archery License is required during Bow and Arrow Season, issued only by County Treasurers at a fee of \$2.15, and the Department of Revenue, Harrisburg, at a fee of \$2.00. Antlerless Deer Licenses are issued only by County Treasurers at a fee of \$1.15, and valid only in the county for which issued. Farm occupants may hunt for deer during the Archery Season and the Special Antlerless Deer Season without a license on lands resided upon, or those immediately adjacent with the written consent of the owner or lessee. Under the law, no application for an Antlerless Deer License shall be approved, or license issued, to a nonresident prior to November 15, or after December 14, 1958.

BEAVERS—No trapping at Commission-posted dams. Nonresidents may not trap beavers. One person may set, tend or operate 10 traps only. Traps must not be set on the structure of any beaver dam or house, or within 25 feet of the waterline on the structure of either thereof. Tags must be kept above ice or waterline to facilitate identification without disturbing traps. Pelts must be tagged within 10 days after season, and may not be sold or otherwise disposed of until properly tagged. Present them to the Game Protector in District or County where trapped.

TRAPPING—Traps for furbearers not to be placed, staked or set before 7:00 A. M. on the first day of open seasons. The season indicated for Trapping closes at 12:00 o'clock Noon on last day. Traps must be tagged with metal name tags

SNARES—The use of snares is prohibited in all counties except by special permit.

Woodcock, Dove & Shorebird Seasons
Set by U. S. Fish & Wildlife Service

The seasons and bag limits governing the hunting and taking of certain migratory game birds in 1958 have been established by the U. S. Fish and Wildlife Service.

The following federal regulations will be effective in Pennsylvania for the taking of rails and gallinules, including sora—from September 1 to November 8, inclusive. The bag limit for rails and gallinules, except sora, is 15 daily, but not more than 30 may be in possession after the first day. The daily and possession limit of sora is 25.

Woodcock may be hunted from October 15 through November 22. The daily limit is 4; the possession limit 8 after the first day.

The 1958 dates and limits are about as last year for the birds named above. But there are changes in the mourning dove season, shooting hours and aggregate possession limit this year. The dove season—September 1 to November 4, inclusive—begins earlier and ends later than in 1957, but the shooting hours will be noon to sunset, ONLY. The daily bag is 10 and the possession limit after the first day is 20. The aggregate possession limit is twice that of 1957.

No game of any kind may be hunted on Sunday in Pennsylvania.

PENNSYLVANIA
SUNRISE-SUNSET TABLE

The following times of sunrise and sunset are based on the 77th Meridian which runs north and south through Eastern Adams County, Harrisburg Airport, Williamsport and Eastern Tioga County. Times shown are EASTERN STANDARD TIME.

Hunters in localities east or west of the 77th Meridian should note that there is a considerable variation in sunrise-sunset times from those shown before (as much as 8 minutes earlier in Philadelphia and 12 minutes later in Pittsburgh). Check your local weather station for correct information.

Date	Sunrise	Sunset	Date	Sunrise	Sunset
September	a.m.	p.m.	September	a.m.	p.m.
1	5:34	6:39	16	5:49	6:15
2	5:35	6:37	17	5:49	6:13
3	5:36	6:36	18	5:50	6:11
4	5:37	6:34	19	5:51	6:10
5	5:38	6:33	20	5:52	6:08
6	5:39	6:31	21	5:53	6:06
7	5:40	6:29	22	5:54	6:05
8	5:41	6:28	23	5:55	6:03
9	5:42	6:26	24	5:56	6:01
10	5:43	6:25	25	5:57	6:00
11	5:44	6:23	26	5:58	5:58
12	5:45	6:21	27	5:59	5:56
13	5:46	6:20	28	6:00	5:55
14	5:47	6:18	29	6:01	5:53
15	5:48	6:16	30	6:02	5:52

(To Be Continued Next Month)

GAME PROTECTORS APPREHEND SCHUYLKILL COUNTY VIOLATORS; JULY RAID NETS 13 PERSONS IN ILLEGAL DEER KILLING RING

On July 24 seven Pennsylvania Game Protectors from Schuylkill, Dauphin and Northumberland Counties assembled and moved in on a number of persons who have been killing or possessing game unlawfully in Schuylkill County. The combined force of officers apprehended 13 persons implicated in killing or possessing deer, or parts of deer, unlawfully taken in the Mahantongo Valley in Schuylkill County during the last two years. The concerted action was taken after many months of investigation by the Commission's field officers.

When the round-up was completed prosecutions were brought against 5 men, one woman and 7 teen-age boys for killing deer or possessing venison unlawfully.

Morris Stewart, Supervisor of the Game Commission's Southeast Division reported: "The killing was principally done by teen-agers who used lights and shot deer with .22 caliber rifles at night. Two of the firearms were seized by the Game Protectors. Most of the time the boys shot from automobiles, and several cars were used in the illegal acts. The boys, all from Schuylkill County, disposed of deer they killed by giving, selling or trading the carcasses, or pieces of the meat, to friends and neighbors in the same county. In one case a whole deer carcass was traded for a 15-ounce box of candy!"

The persons involved paid fines totaling \$2,100. Each case in which, contrary to law, a deer has been killed or venison possessed carries a \$100 fine. Four of the persons apprehended paid fines amounting to \$300, the others \$100 each. The defendants live at Klingerstown, Pitman, Lavelle, Shenandoah, Frackville, and Ashland.

Game Commission officers who

teamed up on this operation were: F. Mason Spancake; R. L. Shank; Billy Drasher; Jacob Sitlinger; Walter Schlosser; Earl Carpenter; and Clyde Laubach. The prosecutions were brought before two Justices of the Peace: Peter Spehr of Pitman and John Tascho of Frackville.

Payoff Comes When State Officers Combine Forces

An outstanding catch of all-around lawbreakers was accomplished in northern Pennsylvania during early July as the result of investigations carried on by Game Protectors and a Fish Warden, and was completed through the cooperative efforts of State Police officers.

Cases successfully prosecuted involved 9 young men and resulted in the collection of \$545 in Fish Law fines and \$600 in Game Law fines. Nine cabin robbery cases in the vicinity were also cleared up as an outcome of the game and fish investigations and interrogations of the culprits.

The violators involved killed a deer, caught fish in a licensed fish propagation pond, broke into camps and destroyed timber.

Game Protectors who made the investigations and prosecutions were: Norman Erickson, Emporium, and Fred Servey, St. Marys. The Fish Warden was N. Clair Fleeger, Dagus Mines. The Game Commission's Executive Director M. J. Golden and the Commission's Northcentral Division Supervisor, LeRoy Gleason highly praised troopers from State Police Sub-stations at Emporium and Ridgway for ready and capable assistance rendered in these cases.



U.S. ARCHERY TEAM which competed in the international competition at Brussels, Belgium in late July were: men, left to right: James Caspers, Racine, Wis.; Tim Cantwell, Kirkwood, Mo.; Harold Doan, Adrian, Mich. Women, left to right: Carole Meinhart, Pittsburgh; Ann Corby, Boonton, N. J.; Ann Sevey, Excelsior, Minnesota.

Swedish Archers Take Top Honors at Brussels Meet; U. S. Team Captures Women's Team Title

A former Chicagoan now living in Sweden is the new women's world archery champion. Mrs. Gunnar Johansson, 42, of Skovde, Sweden, took top honors in the women's division with a score of 2053. The international tournament was held on the World's Fair grounds at Brussels, Belgium, July 20-23.

Top scorer in the men's division, and present men's world champion, is Stig Thysell, 40, of Skene, Sweden. Thysell, a supervisor for a telegraph company, had a score of 2101.

Although bad weather was judged the principal reason why no U. S. archers took first place honors, the women managed to capture second, third and fourth places in their division. Second place was won by Ann Corby; Boonton, N. J., with a score of 2042. Carole Meinhart, Pittsburgh, Pa., the defending women's champion, placed third with 2016. Ann Sevey, Excelsior, Minn., came in fourth with a total of 2,000.

The U.S. women's team captured the trophy for women's team championship. Combined score for Ann Corby, Carole Meinhart, and Ann Sevey was 6111.

One record was broken at the tournament by Ann Corby—the total score for a double 70 meter round. Mrs. Corby's score for the round was 468. The previous record, 462, was set by Ann Clark, Cincinnati, Ohio, at last year's international tournament in Prague, Czechoslovakia.

The men's team championship went to Finland whose three official members chalked up a total score of 5936. Besides Kallionpaa, Finland's official team included Vaina Ansala and T. Rautavaara, both of Helsinki.

Weather conditions were extremely unfavorable to all contestants, particularly to the American team. It rained off and on every day of the tournament and temperatures ranged from 98 degrees on one day to under 50 degrees on others.

It could be said that the weather was favorable to the Swedish and Finnish archers. Many of the Scandinavians mentioned that it was very similar to their own weather.

Thirty-seven women and 97 men competed in the tournament. They represented 15 nations, including: United States, Belgium, Switzerland, Czechoslovakia, Germany, Denmark, France, England, Luxembourg, Norway, Poland, Netherlands, Sweden, South Africa and Finland.

Summer Rains Result In Abundance of Food and Cover for Wildlife

Encouraging reports about natural foods for game have come from Game Commission personnel almost everywhere in the Commonwealth. Here are some typical observations:

Game Protector Keith Hinman, Tioga County: "There seems to be a bumper crop of all game foods this year. An excellent nut crop is in prospect and apples are plentiful."

Game Protector Joseph Kistner, Centre County: "Throughout my district natural foods for wildlife are in the best supply in years. There is a good berry crop, acorn prospects are fine and wild and tame apples are plentiful."

Clifford Ruth, a Land Group Manager in southwestern Pennsylvania,

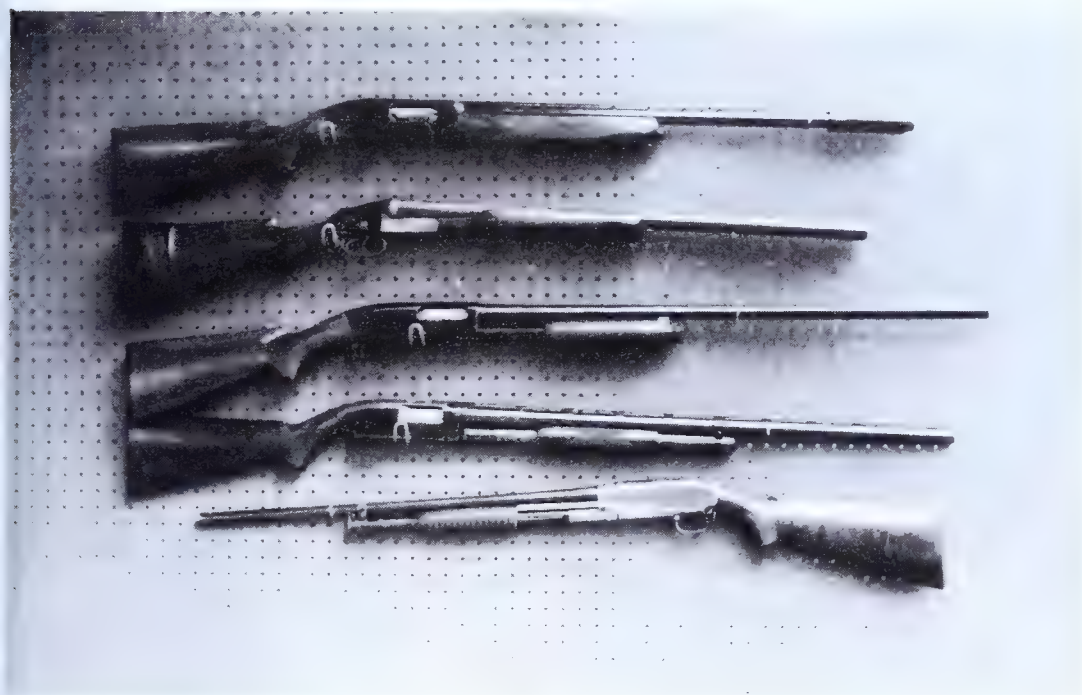
reports, "There appears to be a bumper crop of food for wildlife this year. This is especially apparent on State Game Lands in Armstrong, Indiana and Cambria Counties."

Game Protector Rozell Stidd says, "In Potter County about half the beech trees of any size are so loaded with nuts some of the branches are drooping. We will have some wild cherries but late frosts caused many of them to fall off while green. June berries and blackberries are a good crop, and we have a fair amount of wild apples and hornbeam seeds."

Nicholas Ruha, a Land Group Manager in the southcentral counties, was highly pleased with his observations. He reports, "The amount of food present in forest and field this summer is little short of fantastic. Trees, shrubs and vines seem to be overloaded with fruit."

WAGON TOUR TO CONSERVATION DEMONSTRATIONS was a highlight of the 16th National Plowing Contest and Conservation Exposition held in Hershey last August. Thousands of Keystone State farmers and other guests witnessed conservation practices being applied to a 2,000 acre demonstration area while tour guides explained the details. Various state agencies, including the Game Commission, presented educational exhibits on Conservation.





Fun With The Scattergun

By Jim Varner

TO THE outdoorsman, and especially the hunter, September brings to mind many endearing anticipations far removed from the complexities of modern day living. Summer is on the wane and certain indefinable changes are occurring. What does this month of change mean to a Pennsylvania sportsman? You guessed it—days afield with a favorite shotgun. So let's talk about the smooth-bore which, as all of us know, dates back centuries before the rifled tube came into existence. It is a most interesting short range weapon that has been used all over the world to bag small and large game.

Modern sportsmen have a choice of

four different actions in shotguns: double barrel, slide action repeater, semi-automatic (there is no such thing as an automatic shotgun) or bolt action. The "double" may be bored modified and full choke or any other combination. The other actions are all single barreled and may be bored anywhere from true cylinder to full choke, or they may have any one of several adjustable choke or pattern and recoil control devices attached. These guns may vary in gauge from 20 to 12 with a few of the big, modern 10 gauges showing up here and there, as well as a few 28 and 410 gauge. The last two small gauges are patterned normally at 25 yards while the others are patterned at 40 yards.

Did you ever take time to sight in your favorite shotgun and check its pattern percentages with the shells you have selected for different purposes? You should have a fair knowledge of what you can expect your



gun to do with all loads from the standard trap load with number 7½ or 8's up to the heaviest magnum loads with 2's or BB shot. Time spent patterning your shotgun may, and usually does, pay big dividends at the traps or in the field. I am sure you will find the results interesting and in many cases surprising.

Whether your gun is 20, 16, 12 or 10 gauge, your pattern percentage should approximate about the following for the different borings:

In a 30 inch circle at 40 yards—

- (1) Full choke should throw 70% or more of the pellets.
- (2) Modified choke should throw 60 to 65%.
- (3) Improved cylinder should throw 50 to 55%.
- (4) True cylinder should throw 40 to 50%.

There are, of course, other bore modifications from reverse choke to extra full, including certain skeet borings and over borings for large shot in heavy charges, but to avoid

technicalities, we will stick to the four standard borings. I will also leave the smaller gauges to those who like them. They are good little light recoil weapons with which to start youngsters and ladies although light loads in the 20 gauge guns will do a better job.

Perhaps a word to the beginner on how to sight in and pattern a shotgun will help. Obtain several sheets of brown or white wrapping paper, 36 to 40 inches wide. In a pinch two strips of 20 inch paper can be pasted together with masking tape. The target should be at least 40 inches square. Stick each target on a suitable wooden frame or large cardboard. Fire only one shot at each target.

Place a three to six inch bulls-eye in the center of each sheet for a sighting point; then step back 40 measured yards and throw your gun to the shoulder as you would in the field. Glance down the barrel and squeeze (don't jerk) the trigger when the front sight is on the aiming

PROPER POSITIONING of a shotgun is important. Sore cheeks and shoulders result only because a shooter doesn't know how to hold the gun.



point. The recoil of a shotgun makes some fellows as jittery as a long tailed "putty cat" in a room-full of rocking chairs. Try to overcome this. If your shot was good and the bulls-eye was in the center of the pattern, your gun fits you and is correctly sighted.

Now draw a 30 inch circle around the center of the group and count the pellets within the circle. The number of pellets per ounce runs about as follows:

Number	8 — 400
Number	7 — 350
Number	6 — 225
Number	5 — 170
Number	4 — 135
Number	2 — 90
BB	— 50

If you are testing the standard trap load "16" with one ounce of Number 7½ shot and you counted 252 pellets in the 30 inch circle, you have approximately a 67% patter which is near full choke. You should fire at least five patterns for each load you intend to test and then take the average which may show this combination of gun and shell capable of full choke performance. On the other hand the 67% first pattern may prove to be well above the average. In that case your "sixteen" may be a good consistent modified. In either case, if your patterns are evenly distributed, you have a very satisfactory hunting gun. The same gun tried with the modern 3½ dram, 1¼ ounce Number 4 magnum load might throw tight 120 to 128 pellet (or 70 to 73%) patterns. This would make it a very satisfactory wildfowl gun for ranges to 55 yards.

The procedure outlined above applies to all shotguns as well as to all chokes and choke devices. As you can see, getting acquainted with the simplest form of a shotgun, which is the single barrel with one given choke, takes time and is tedious. The double-barrel requires twice as much testing while the multiple chokes



THE AUTHOR is pictured here while hunting waterfowl a few years ago with one of his favorite shotguns. The big 10 gauge magnum he is using worked equally as well in crow hunting, Mr. Varner accounting for over 2500 crows with this particular gun during the 10 years he owned it.

really require a lot of targeting. If you find your gun is shooting high, low, right or left to such an extent that it can make a lot of misses, better get it corrected immediately. Few shotgunners think the scattergun can be off center. Many attribute their misses to lack of skill. But a gun can be "off" and it will cause a lot of disappointment in the field or at the traps.

Seldom will you find a shotgun that centers its shot pattern too high. Actually, to the trap shooter, fox hunter and wildfowl, a high shooting gun is an asset. Remember, fellows, that a shot charge drops rapidly—at least 10 inches at 40 yards and all of 24 inches at 70 yards. If you are one who questions this statement, try firing at a duck sized target 50 yards out on a lake. See where the center of your pattern lands. The water test also gives you a good idea

of the dispersion of pellets mutilated by the choking cone as they are forced through it at high velocity.

Speaking of velocity, the shot charge is limited to a certain maximum velocity which is in the neighborhood of 1300 feet per second at the muzzle. If we stay below this velocity, a better pattern usually results. If we load to a higher velocity, we defeat the purpose of the shotgun by obtaining a patchy, uneven pattern caused by a lot of mutilated pellets which do not fly true to their course and lack penetration. Therefore an attempt to develop express loads gains us little.

The spherical shape of the shot gives it the poorest ballistic coefficient of any type of projectile. Its forward thrust is snubbed or slowed down quickly by air resistance with the corresponding rapid drop due to the always present law of gravity. Actually, the modern shotgun with its velocity limitations gains little in performance over muzzle loading black powder weapons used by our ancestors except in rapidity of fire, cleanliness of smokeless powder, a better knowledge of choke boring and streamlining in design and weight.

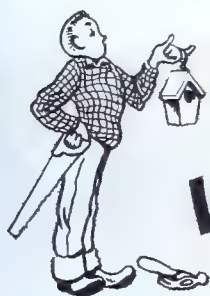
Next month we will discuss further what the hunter can do and what he can't do with the gun he purchases for a certain all-purpose job. We will try to guide him, in spirit, wherever he hunts, whether he is beating the briar patch for rabbits, working the corn fields and stubble for ringnecks or is freezing his hands and feet in a duck blind. A lot of you old-timers know the answers and we are not so much concerned about your ability. Our suggestions are aimed at helping the newcomers and inexperienced hunters. But if this initial article has in any way renewed your interest in sports afield or whetted your appe-

tite on shotgun ballistics, just pull your chair up closer to the rest of the group when we continue our "bull session" in the October issue. In that article we will attempt to enlighten the shooter on the effects of weight in the different gauges, barrel length as far as effective range is concerned, and offer answers to many other questions that are not clear in the minds of many shooters.

Until next month, then, here are a few things to remember: What kind of care are you giving the guns that you will soon be using in the field? Don't forget that a little extra thought or care for a prized double, repeater or semi-automatic means trouble free performance when that old "chink" thunders into the air with his wild cackle or a pair of gimlet-eyed greenheads come power diving toward your decoys. Unless you are "clicking" one hundred percent in either case, I suggest you think up an airtight alibi when you face the family.

Perhaps you need a bluing job or a new fore-end that was cracked when you fell on it last fall. Maybe you discovered that the ejector was faulty when you last used the gun but just haven't gotten around to taking it to a good gunsmith. Maybe a complete overhaul of your favorite scattergun is in order. You might have even promised yourself an installation of a ventilated rib or one of the multiple choke accessories when you stopped hunting last year.

Well, now is the time to get that job done. Don't put it off until a few days before the season opens when everybody is rushing into the local gunsmith or attempting to get quick service from the factory. Don't leave anything to chance and by the same token, don't take chances in the field. A shot fired recklessly can never be recalled.



OUTDOOR FUN WITH A FUTURE



Play It Safe

By Ted S. Pettit

THE best time of the year for most sportsmen is fast approaching. Fall is almost here, with its crisp weather, colorful foliage and open seasons for game, birds and mammals. The rail season opens very soon, followed in a few weeks by the waterfowl season, upland game and

big game. Many of us have waited for nearly a year for the fall season and the big day—the first day of the hunting season.

Most of us have checked over our guns and stack of ammunition. We've checked our hunting clothes and we're all set to go. But too many of



PROPER POSITION in a boat is important to safety. Shooting sideways from a shallow duck boat may result in a thorough dowsing—or worse. Most boat accidents are caused by people falling out of the boat or capsizing it.



SUSQUEHANNA SNEAKBOAT as shown in operation here is widely used in Pennsylvania duck hunting. It takes practice to use one and only skilled boatmen and hunters should attempt it. Tipping the boat on its side is proper procedure for getting ducks, but is dangerous for people who aren't familiar with water safety.

us have not checked over a few other things, little things, that can easily make the difference between a successful trip and a failure. Some of these things fall into the category of equipment, and others into the category of outdoor skills, all of them are important to the outdoor man, especially the beginner without too much experience in the outdoors.

Small Boat Safety Skills

Small boats are used widely in both rail shooting and waterfowl shooting—not in the actual shooting itself, but in getting to the best places to hunt, and each year many a hunting trip comes to an unhappy end because of boating accidents.

Surveys of boating accidents made by experts in the field show that almost every accident could have been prevented and that most of them are caused by carelessness.

Strange as it seems, most accidents were caused by people falling out of boats or by boats capsizing. The first rule then, of small boat safety is keep low in the boat. Do not stand up, especially when the boat is in deep water. When moving from one part of the boat to the other, keep as low

as possible and hold on to both gunwales so that you do not tip the boat.

Many small boats are capsized or swamped because they are overloaded or over-powered for their size. Many boats have a small plate fastened to the transom that tells the safe load to carry and the maximum horse power for the motor. Careful sportsmen stay well within these limits.

Too many casualties result from small boat accidents because when a boat capsizes or swamps, the occupants try to swim to shore and either under-estimate the distance or over-estimate their swimming ability when loaded down with heavy clothes and pockets full of gear.

Virtually every boat manufactured today, whether of wood, metal or fiberglass will float when filled with water. They will still support their original occupants. Boat safety experts recommend sticking with the boat until help arrives or until you can paddle the swamped boat to shore or shallow water. The best stunt is to climb in the swamped boat and be flat in the water in the boat, and to paddle slowly to shore, or let the wind carry you to shore. But stick with the boat. It will float.

Another important safety rule—and one that is required of all power boats—is to carry a life preserver for each passenger. But life preservers, whether seat cushions or the vest type, are of little value unless you know how to use them. So practice on dry land and have them readily available in the boat.

Most of us do not think of anchors and anchor line as a safety device. But they are, and should be included in the equipment of every boat. In case the motor conks out, the anchor will hold you in position until you get it fixed or help arrives. Fall winds can carry you for miles on a large body of water with sometimes rather unhappy results. But the anchor line is as important as the anchor. It should be strong line, and long enough to equal three times the depth of the water. Anchor lines that are too short will not enable the anchor to hold on the bottom, and the anchor will drag and perhaps reach a point where it will not even reach bottom. So know the depth of the water and take along plenty of line and a good anchor.

The last two rules, if followed, can save many a soaking. Be constantly alert for approaching storms, particularly strong winds. Get to shore before they hit, and stay there till they blow over. If you do get caught out, head into the waves, either head on or at a slight angle. The bow of the boat is usually the deepest and will ride over average waves. The transom, cut out to take the motor, is the vulnerable end in high waves. The waves may splash into the boat and swamp it, or so soak the motor that it conks out.

These few small boat safety rules if followed can prevent many an unhappy ending to an otherwise successful trip—and they are all basically only a matter of common sense afloat.

Personal First Aid

For many sportsmen, the only real

rugged exercise they get from one year to the next is hunting. More and more of us lead rather easy lives. Even fishing does not provide the exercise you get climbing a mountain to a deer stand or slashing through a marsh to a duck blind.

Each year a few sportsmen are "stopped" before they even get started. The first few yards of heavy going in a marsh, or the first hundred yards on an uphill trail is too much for them.

Doctors recommend that every sportsman have a thorough examination before he tries out his heart on mountain trail or duck marsh. This precaution is a wise one for any outdoor man, and can save lives.

Rare is the sportsman who has never experienced some sort of outdoor accident, usually not serious, but uncomfortable enough to spoil an otherwise successful trip. Most of the time these minor injuries can be treated easily with no interruptions of hunting. Other injuries can be treated quickly and prevent more serious difficulties later on.

Game News GADGETS

BY JOHN F. CLARK

MUCH UNNECESSARY SUFFERING AND DISCOMFORT COULD BE AVOIDED IF EVERY HUNTER & OUTDOORSMAN WOULD CARRY A FIRST AID KIT AFIELD... HERE'S A SIMPLE, BUT COMPLETE KIT FOR EMERGENCY USE OUTDOORS...

REMEMBER, ANY SERIOUS ACCIDENT CASE SHOULD BE CARED FOR BY A DOCTOR JUST AS SOON AS POSSIBLE...

CARRY A FIRST AID KIT WITH THE FOLLOWING ITEMS:



LARGE COMPRESS BANDAGES FOR GUN SHOT WOUNDS.



SOME BAND AIDS FOR MINOR INJURIES...



A BOTTLE OF ANTISEPTIC.



SMALL PACKET OF INSTANT COFFEE OR TEA & A COLLAPSIBLE METAL DRINKING CUP... YOU CAN USE THE CUP TO HEAT WATER...

... A HOT STIMULANT GOES A LONG WAY TOWARDS REDUCING SHOCK.



MOST IMPORTANT OF ALL... TAKE A RED CROSS COURSE IN FIRST AID....

The usual injuries encountered by sportsmen run from sprained or twisted ankles to minor wounds, burns or blisters. All of these should be treated immediately to avoid complications such as infections later on.

The Red Cross First Aid Manual or the Boy Scout Handbook tells how to care for minor injuries, as well as major ones, and either book should be part of the equipment of every hunting camp or car first aid kit.

A pocket first aid kit is a handy piece of equipment, and can be assembled at home using any kind of a small plastic or metal box of a size that is convenient to carry in your hunting jacket pocket. These kits should contain sterile pads and gauze, adhesive tape, band aids, some kind of antiseptic, a small pair of scissors to cut gauze or tape, a needle to remove slivers, and some kind of good burn ointment. All of these items come in small sizes and can be assembled in a box that is no more than the size of a package of cigarettes.

Compass and Map Reading

With the ever increasing number

of sportsmen, it becomes more and more necessary to seek out the wilder parts of the state for successful hunting—particularly big game. In some places this may mean hiking in for several miles off the highway, and it also means that if you want to find your car again with a minimum of walking, that you should be able to use a compass and read a map. These are easy skills to learn but should be practiced well ahead of time so they become second nature rather than something you have to think about and figure out some dark afternoon in November about 4:00 when you have four miles to cover before dark.

The Boy Scout Handbook and the Boy Scout Field Book both give explicit directions for using a compass and reading a map.

Many times, though, it is difficult to get a map to take with you in the field. But it is possible to look at one. The best thing then, is to make a drawing of the area where you expect to hunt, and to carry this drawing with you. But most old timers will make a sketch map filling in only significant features, features such as

GUN, KNIFE AND COMPASS are three essential items of equipment on almost every hunting trip.

Photo by Don Shiner.



ridges, roads, trails, rivers, streams, rocky out crops or such topographic features that they can use to orient themselves and get them started in the right direction back to camp or their car. This sketch map always has on it a scale so you know the distance from one point to another, and also an arrow showing which side of the map is north.

One trick that many experienced woodsmen use is this. Suppose you are riding along a back road when you see some likely looking turkey or grouse cover up on the ridge. You park your car and take off cross-country and hunt for an hour or more. You wander around through the cover, then decide to call it quits. You head back for the car and reach the road. But it's a winding road and you can't see the car. Which way is it?

Old timers do this, and it works: When they start out, they take a compass reading on the area they expect to hunt. Then they hike directly to the cover and find a big tree, rocky out crop, spring, old fence, down tree or something else they can recognize again when they see it. They then take bearings from that point and hunt for an hour or more, returning to that point when they are finished. Then they add 190° to their original compass reading. They go back to the road carefully following their compass, and when they get there they know their car is to the right. They deliberately overshot the car and they know which side they overshot. Thus they can be sure which way to turn on the road, without having to wonder.

Lost Kit

Many hunters who prefer wilder areas for their sport carry a "lost kit" in their pocket. Like a first aid kit this is a small waterproof plastic or metal box, pocket sized, and loaded with those things that might come in handy if they do get lost and have to stay overnight in the woods, or if they turn their ankle and can not hobble out before darkness comes on.

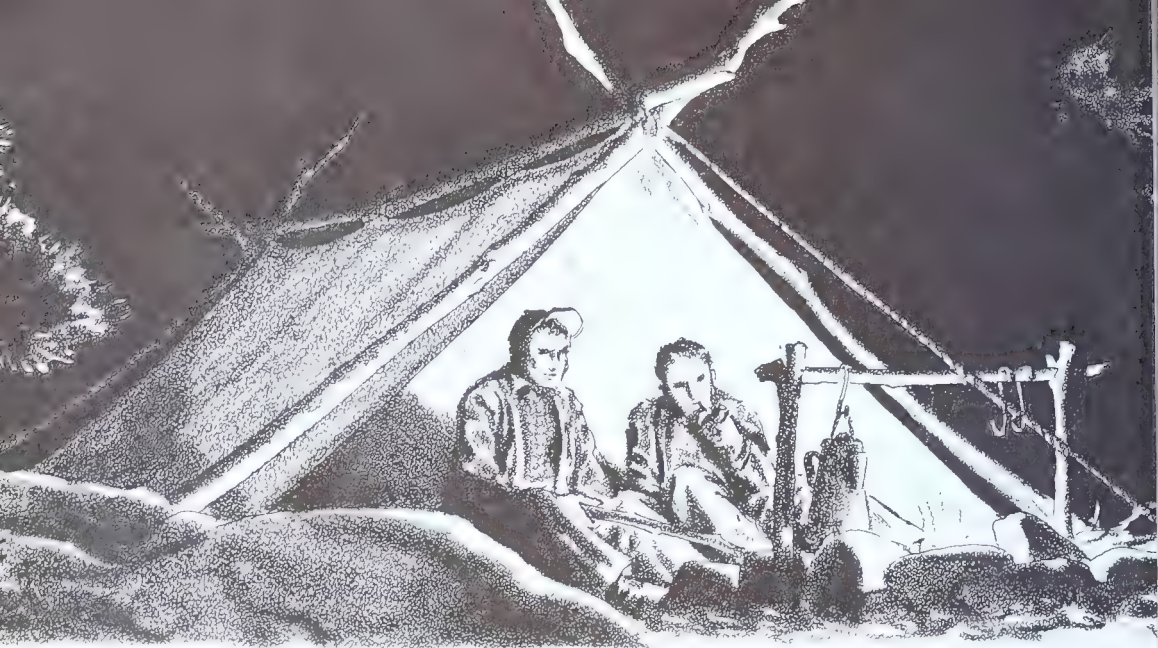
Basic contents for such a pocket kit are: Waterproofed matches (matches dunked in melted paraffin, then let stand till wax hardens); fire starters (obtainable commercially or make your own by soaking 1" square piece of celotex or 1" diameter rolls of tightly rolled newspaper in melted paraffin); 2 or 3 foot square piece of folded aluminum foil (for cooking or reflecting light to call for help); small extra compass; map; concentrated chocolate cubes, instant tea and/or bouillon cubes; paper and pencil; coil and fish line, hooks and flies; anything else you think you may need.

One old timer of our acquaintance always carries a pack of cards. He says that if he gets lost, all he will do is start playing solitaire and in two minutes there will be someone looking over his shoulder to tell him to play the red three on the black four.

But lost kits have saved lives and even more discomfort in the woods at night, and are easy to assemble.

Usually, it is the beginner in hunting who takes chances. The old timers and experienced outdoor men play it safe. It's good rule for all of us to follow, for outdoor fun in the future.





Autumn Deer

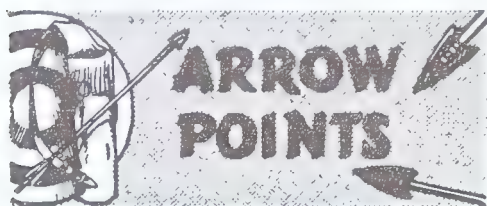
By Tom Forbes

THE valley is shrouded in fog. No breeze stirs and the smoke from the wood fire traces a thin vertical column through the morning haze. Small birds chirp and chatter in the adjoining thicket and as the rays of the sun gild the mountain ridge a new day begins. The rattle of pans and the smell of bacon frying in the skillet arouses the sleepers. Blankets are tossed aside and the camp comes alive.

A quick wash in the near-by stream where the surface of the pool is broken by a rising trout. I squat on my heels and remember the morning in July I fished this same pool. Wild brook trout, a fly dropped gently on the water, a swirl, and then the feel of a hooked fish. The smell of fresh coffee brings me back to the present and I hurry to the breakfast table. This is no cup of coffee, piece of toast and run to catch the 8:10 for work,

but a meal to fortify a man for a day in the woods, orange juice, a steaming bowl of oatmeal, buckwheat cakes and syrup, bacon, and coffee. Many hands made quick work of the camp chores while last minute plans are made for the day's hunt. Tackle is assembled: "Where is my file I loaned you last night?" or "I can't find my shooting glove." Watches are examined again and fifteen minutes allowed to get to the shooting ground. "Good luck." "Remember if he isn't a four point you said you would pass him up the first day."

Similar scenes will be enacted by thousands of bowhunters when they open the archers any deer season on Saturday October 4, 1958 at 6:00 a.m. EST. for the three weeks season which will end Friday October 24, at 5:30 p.m. EST. By law, any deer, regardless of size or sex may be taken. Each resident of Pennsylvania will require a 1958 Pennsylvania Resident Hunting and Trapping License; Fee \$3.15 and in addition a 1958 Archery License. The archery license is issued only by County Treasurers at a fee of \$2.15 or the Department of Revenue, Harrisburg at a fee of \$2.00.



This license must be attached to the hunter's license certificate and countersigned in ink diagonally across its face by the hunter before hunting in the archers deer season.

An exception to the licensing law is: Farm occupants may hunt for deer during the archery season without a license on lands resided upon, or those immediately adjacent with the written consent of the owner or lessee.

Even though there are three separate seasons for taking deer in Pennsylvania, a hunter may not kill more than one deer during the three combined 1958 seasons, whether hunting individually or with a camp or hunting party. During the regular deer season from December 1st to December 13th the archer requires only the Resident License to hunt male deer. During the three day antlerless deer season on December 15, 16, and 17 the archer requires in addition to his resident hunting license, an Antlerless Deer License which is issued only by County Treasurers at a fee of \$1.15, and valid only in the County for which issued.

During the 1957 Pennsylvania archery season, 1,358 deer were taken by 55,554 bowhunters. About one in

every 41 bowhunters (2.42%) were successful. This success ratio is low compared to states which have a longer season (Michigan averages about 6%) but it must be remembered that hunting conditions in other states are different than they are here.

To generalize on any subject is to incur criticism because there will always be exceptions which may be cited. However a bowhunter's chance of success is measureably increased if he is thoroughly familiar with the territory in which he intends to hunt and he has attained proficiency in the use of his weapon. Deer are shot at an average distance of approximately thirty yards and the bowman who can consistently place his arrow in the five ring at thirty yards stands a good chance to make a vital hit on his quarry.

From personal observation and reports throughout the main deer range, the mast crop, beach and acorn, is abundant this year. Last year the beach nut crop was a failure and acorns were spotty. Apple trees in old orchards are again carrying an abundant crop. Due to the lack of mast in 1957, deer tended to concentrate in large numbers in the vicinity

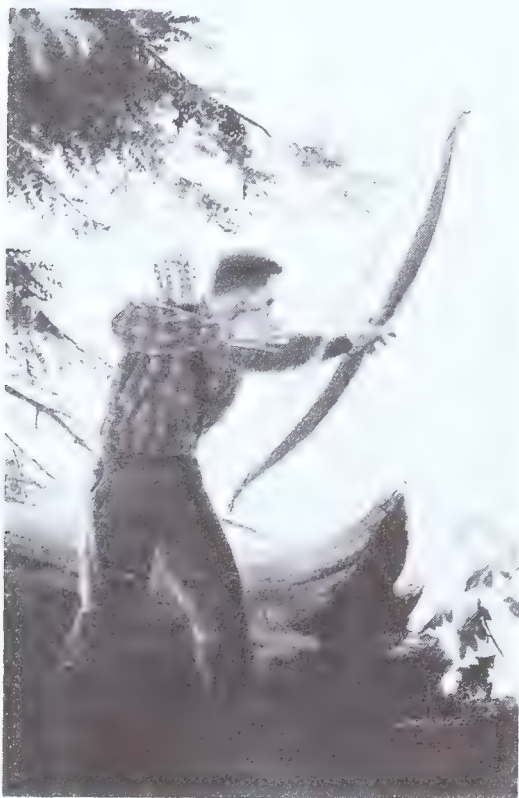


of abandoned orchards. This year with a good mast crop available throughout the range there should be less concentration as the food supply is ample in all sections of the deer's home territory.

Deer like humans are creatures of habit. The home range, contrary to the popular conception, may be as little as one-half square mile and a deer may spend its entire life in an area three square miles or less. On its home range a deer is familiar with every feature of the terrain. It knows every trail, stream, covert, thicket, and hollow; providing it is unmolested and food supplies are adequate the deer will follow the same routine day after day. Deer are commonly thought to feed only in late evening, night, and early morning hours; and to remain bedded down throughout the day. In areas undisturbed by man deer feed quite regularly throughout the day. During the archery deer season the bowhunter is frequently the only human in many square miles

of good deer territory. In the Northern Tier Counties and especially in the National Forest, the back areas, those not easily reached by roads are very seldom ever hunted even in the gun season. In these remote areas deer seldom if ever see a human. The bowhunter who will make the effort to hike into these seldom visited portions of the deer range will stand an excellent chance of getting a shot at a deer.

Bowman who are familiar with their hunting territory and know the trails used by the deer may be able to move slowly and silently through the area and spot deer in concealment before they are aware of the hunters presence. For self preservation a deer depends on scent, hearing, and sight in the order named. If a deer is alerted by a strange noise or sights a strange object it will move closer to attempt to make an identification. Every sense is alerted and the animal will move to a down wind position if at all possible. The first faint scent of man, no matter how well you may be concealed, will start the deer into flight. Reputable hunters will tell you that a deer walking through cover toward your hideout will stop if you whistle and offer you the opportunity for a standing shot. This is only true in case the deer has not been disturbed. If the deer is being driven or is stealing away from another hunter, your whistle will start it into instant flight. I proved that the latter is true when a companion jumped three does during the 1951 archery season. The deer came into the small hollow in which I was standing on the run, slowed down, studied their back trail and then began to graze. They were about forty yards distant from my place of concealment. A friend had asked me to try out a deer call and I blew one bleat. The deer leaped into full flight and disappeared over the rim of the hollow. On another occasion I had a suspicious doe with a fawn approach within twenty-five



yards. The doe gazed intently in my direction for a matter of minutes, stamped her front hoof, her ears erect. Disturbed, but not certain of any danger she finally moved slowly away with her fawn.

By choice a deer beds down on high ground during the day. Air currents are always present. In the early morning the sun's rays warm the tops of the ridges while the valleys and lower slopes are still shrouded in early morning mist. As the upper air is warmed it rises and the cooler air from the valleys moves *up* to take its place. The reverse is true in the evening hours. The ridges and high spots cool quicker than the ground in the valleys and the cool air at the top, being heavier than warm air flows down the slopes and forces the warm air to rise in the valley. The informed bowhunter who is seeking to stalk a deer takes advantage of this natural phenomenon and hunts down the ravines from the top during the morning hours and in the late afternoon reverses his direction and hunts up the hollows. In this manner he is down wind from his quarry at all times on a still day and stands a better chance to steal up on a deer. Scent is quickly dissipated on days when the wind is strong enough to sway the leaves and branches on the trees. It likewise serves to deaden unavoidable small sounds the stalker makes when moving slowly through good hunting territory. Under such conditions a deer is less likely to spot the necessary movement of the hunter. Windy days are a good opportunity to make your attempt to stalk a deer. Likewise a rainy day has its advantages along with its discomforts. You can walk silently on the damp and wet leaves on the forest floor and scent is drowned out by the rain. This latter statement is easily verified when you recall the difficulty a good bird dog has in finding birds on a rainy day. Many times



he flushes the bird before he is able to pick up any scent.

Hunt carefully. Never release an arrow if you do not know exactly where your hunting companion is located. If you are in a blind and a strange bowman approaches, warn him of your presence when he comes within bow range. Provide yourself with a quiver that makes provision to completely cover your broadheads so that you cannot inflict self injury in case you should stumble or fall. Don't carry a broadhead nocked in the bow ready to shoot. It makes a cumbersome package and too many bowhunters have inflicted injuries on themselves or their companions while carrying the arrow nocked in the bow.

Good sportsmanship makes it mandatory that each and every one of us abides with the game laws and regulations. The sport of bowhunting demands of us that we build good public relations. Intentional violations are few in numbers. They can be eliminated altogether. Protect your sport by reporting any violation that you observe. The violator can do your sport serious injury. He can be the cause of burdensome regulations which would apply to all of us.



TEACH THAT BOY TO SHOOT—SAFELY

Boys are known to have a seemingly inexhaustible store of energy and plenty of curiosity, and American lads have a natural desire to own and shoot a gun. There's nothing wrong with this except that it can add up to trouble during vacation time.

In most cases parents have found the surest gun safety measures to be: 1. Keep all firearms in the home unloaded. 2. Lock up all ammunition. 3. Teach sons safe firearms handling, at home, on the range and in the hunting field.

Many a father has learned that by taking his son to a rifle range for practice and occasionally taking him crow or woodchuck hunting he has satisfied the boy's desire for summertime shooting. Following this procedure dad can rule (and Junior will usually comply), "Leave guns alone—at home or in the company of other boys—except when you and I are together or you accompany an adult with whom I have said it is alright to shoot."

Many a busy dad has suddenly come face to face with the fact his "little boy" is little no longer; he is about to enter college or military service. Too late then to lament, "I wish I had spent more time with my son." In this connection Henry P. Davis, Public Relations Director for the Remington Arms Company, makes an excellent suggestion in the following:

"A father-and-son camping trip opens new vistas in personal relationships for both," says Davis. "It places them on a 'buddy basis' which develops a spirit of camaraderie that is bound to bring them closer together. The length of the trip makes no difference. It may be a week's fishing jaunt in the wilderness or only a single night under the stars along some neighborhood pond or in some nearby woods. But somewhere and somehow something will happen that will bring the pair closer together. It never fails. It may be a 'man-to-man' talk about things that were not common to everyday conversation, or it may be some display of ingenuity that will add to the stature of the father or increase the father's interest in his son. Regardless of its nature, the pair will return home with a new-found respect for each other and the bond of affection between them more solidly forged."

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PENNSYLVANIA GAME NEWS

OCTOBER, 1958

TEN CENTS





THE STORY BEHIND THE COVER

OF all the forms of human torture known to man, none is more enjoyable than woodcock hunting. A day spent crawling through the alder and thorn-apple thickets leaves you wet, scratched,

and dog-tired. But at the same time, the object of it all will give you sport par excellence and it may even result in a palate-tickling breakfast broiled on toast.

Woodcock hunters are not as common in Pennsylvania as are those men who go afield each fall for bobwhite quail, ringneck pheasant, grouse or other, larger game. In fact, timberdoodle hunters are quite often classified as quite uncommon. They usually have a secretive manner in both the preparation for and the conduct of the hunt. Favorite coverts are closely concealed even from their dearest friends. And good woodcock dogs are usually prized far more than the ordinary treasurers of life.

Many think the woodcock is an extremely difficult target. Other hunters consider him an easy mark. Yet anyone who has hunted the little brown ghost of the bottom lands for very long will tell you that he is a combination of both. And he is definitely far from stupid else he would have vanished from the American hunting scene long ago. Some days he will rise from beneath your feet and fly straight away. Other times he will flutter up through the brush like a moth, giving you a sight picture over the gun barrel that is bound to make you cross-eyed.

Take the fellow on this month's front cover, for instance. Which bird should he try for next? He's already missed the woodcock going straight away from the dog's point with both barrels. And we'll wager that the second bird which waited to flush behind him until the first volley was over is going to go free as well.

Migratory and unpredictable, the little woodcock has won for himself a warm spot in the hearts of his followers. Although Pennsylvania does not produce a large part of the birds which each year migrate south to the coastal regions of Louisiana and other states, it plays an important role in the route taken by this unique member of the shorebird family.

And each October, there are those sportsmen who head for the alder bottomlands, the upland flats patched with quaking aspen and thornapple, and wherever woodcock might be found with shotgun in hand to test their skill. For them, there is no finer sport in all outdoors than that offered by a timberdoodle topping the thicket against a blue azure sky.

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PENNSYLVANIA GAME NEWS

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OCTOBER, 1958

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IS this bird going to add one more figure to the cripple-wastage score? Almost 5 million waterfowl will be lost and wasted this year unless you do something about it. Nation-wide waterfowl studies have shown that losses from crippling and unretrieved birds range from 16 to 58 per cent, with a shocking national average cripple loss of 25 per cent.

Think of it, for every 100 ducks and geese knocked down, 25 are never recovered.

The principal causes of cripple loss are trigger-happy shooting, inability to judge distance, poor marksmanship, overestimating the killing range of modern shells, poor sportsmanship, and failure to retrieve birds. For the last-named, the best cure is the use of a well-trained dog.

Surveys reveal that cripple waste varies widely with shooting conditions. Loss is heaviest in the early part of the season when vegetation is dense and when hunters, both novice and experienced, are a bit rusty on the marksmanship. Pass shooting, which calls for the highest degree of gunning skill, takes a much heavier toll of cripples than decoy or jump shooting.

No conservation agency, federal, state or private, can effectively control cripple loss. Only you, the individual who controls the trigger, can effectively reduce this tragic waste which every year results in almost 5 million waterfowl down the rat-hole of indifference, carelessness, and accident.

In 1958, let's adopt a simple plan to reduce "cripple-wastage":

1. **SHOOT ONLY AT BIRDS AT REASONABLY CLOSE RANGE**—when you hit there, you kill, and when you miss, you miss clean.
2. **USE A RETRIEVER**—it adds to the sport and cuts cripple loss by more than half.
3. **THINK**—a split second can mean a duck in the bag or a duck in the reeds.



Editorial . . .

Safety And Respect

WITHIN a few weeks, more than a million Pennsylvanians will leave their homes and places of work to hunt the farms and forests of the Commonwealth. Individually and collectively, they will be searching for the thrills of a sport as old as mankind itself. This is their annual opportunity to escape the pressures of the space age for a spell, to pit their wits and skill against the cunning and instincts of wild game.

They engage in one sport where it is not required to make a "score" or surpass the record set by other participants. Hunting offers no tangible rewards other than self-satisfaction and perhaps meat for the table. There is no sterling silver trophy cup nor cash prize, no championship title nor world series pennant. Your competitor in hunting is not so much the game you seek as it is yourself. The only true measure of success is how well you overcome your own weaknesses—your lack of strength or skill, adverse weather and terrain, bad luck, understanding of the creatures you seek.

No hunter should be judged by the amount of game he brings home. There are too many factors in hunting beyond human control. The best hunters quite often come home empty handed; the novice commonly gets the biggest buck or the fullest game bag.

But there are two trademarks by which all hunters can be measured. These are simply SAFETY and RESPECT. The man who displays these qualities will be a good hunter—a credit to his sport. He respects the game he seeks, giving it a fair chance of survival. He respects his hunting companions, giving them equal opportunity to participate in the hunt and their fair share of any shooting the luck provides. But most of all, he respects the owner of the land upon which he hunts—either public or private. The true sportsman always asks permission before hunting on privately-owned land and he then conducts himself in such a way that he always will be welcome to hunt there again. He follows the same rules of decent, law-abiding conduct, both written and unwritten, on publicly-owned land.

At the same time, expert hunters are also characterized by the respect they show their guns or bows. They realize that only a fool—and a potentially dead fool, at that—grows careless and casual in gun handling. The trademark of safety must be earned through practice, skill and consideration. Every gun is treated as if it were loaded. The pointing of any gun toward a human being—the unpardonable sin of shooting ethics—never occurs.

Public hunting's future depends upon the safe use of sporting arms and ammunition. The areas upon which hunting will be permitted depend on the respect shown the landowners. This fall, when you go afield with gun or bow, practice safety and show respect.



Pennsylvania Woodcock Shooting of 110 Years Ago

CONDENSED FROM JOHN KRIDER AND H. MILNOR KLAPP

By Herm David

(Part I)

Through the years the woodcock, with his long and improbable bill, his stumpy body and a look of great wisdom in his eyes, has given rise to many legends. Because of his almost preposterous appearance, Seneca Indians believed the Creator made him from dibs and dabs that were left over after the rest of His creatures were complete.

Mr. Timberdoodle has given exciting and rewarding sport to many generations of Pennsylvania sportsmen. One-hundred and more years ago, two citizens of Philadelphia wrote of their experiences with woodcock, both afield and under other, more unusual, circumstances. One of these men was John Krider, a famous gun maker with a prosperous shop on the northeast corner of Second and Walnut streets. His associate, the very erudite and delightfully perceptive H. Milnor Klapp, "edited" a book titled "Krider's Sporting Anecdotes" which was published by A. Hart at 126 Chestnut Street in Philadelphia in the year 1853. Because the writing seems to be entirely the work of Klapp, Krider's greatest contribution, apart from the use of his name, apparently was the cash to underwrite publication of the book.

Since most copies of this rather rare book are now in the hands of private collectors, we are making the chapter on woodcock available through publication in this and next month's issue of GAME NEWS. In condensing this material for publication, we have tried to retain the flavor of the rather flowery prose of a by-gone era.

For the Pennsylvania sportsmen of today, here is an intimate glimpse into what hunting was like one hundred years ago—over some of the same country he hunts today.

"DO YOU know what bird that is?" your attendant asks, pointing toward the meadow with his unshorn chin.

"Certainly," you reply; "it is a woodcock."

"Nay," says old Barleycorn, smiling at your fancied ignorance, "it is a B U S H S C H N I P. I haven't sawn a woodcock on these lands since I were a boy."

You are only at odds about names, however, the farmer fancying that you spoke of the great pileated woodpecker, once common in the forests of Montgomery, and with its kingly congener, the ivory-billed, long ago so admirably described by Wilson; while you, perhaps, are almost as far led astray by the quaint but appropriate title, which he bestows upon the bird in question, and by which it was always distinguished in the primitive days of his fathers.

As soon as you are set right again, he will tell you that he has seen as many as five or six woodcocks engaged in these aerial courtships, in the morning and evening twilight, at this season of the year, making a curious medley of sounds which, perhaps, he will describe as a mingled quacking and whooping, loud enough to be distinctly audible on his porch, at least a hundred yards distant from the meadow.

On one occasion, while he was standing at the fence, one bird descended so close to another already on the ground that he saw them en-

gaze in a duetto, which lasted for several moments. They tilted and tugged with their long bills, and flapped each other with their wings, their tail-feathers stiffly erected and their plumage inverted, until the spectator, a conscientious member of a society religiously opposed to all species of combats, save those of flesh and spirit, stepped from his place of concealment and put both belligerents to flight.

A week or two later in the season, you chance to be crossing the fields, on your way to the village post-office, perhaps with some four-footed companion of your sports composedly coursing your heels. You are passing along the skirt of a wood; it is a balmy April day; the wind is fresh from the south; and you seem to scent the odor of early violets afar off as cloud after cloud flits through the blue air. Turning your head, you glance back at your familiar, and lo! Your familiar is "at a stand."

There is a knostic yet half quiz-zical look involved in the wrinkles in the old Trojan's portentous face, which makes you think that he has a tomcat or a stray fowl skulking in the bush; and feeling a slight flutter of expectancy yourself, bending low, you peer curiously about, until suddenly, as by a flash, your gaze is arrested at once, and little fairy, fairy bubbles float up, as it were, from your heart to your eyes, as amid the thin, dry herbage at the roots of a bush, or a decayed stump, you see, within reach of your hand, the woodcock brooding on her nest.

By jove! here is a discovery. You almost feel as if you had stumbled upon one of nature's inscrutable secrets.

The old pointer is as steady as a statue; the wild bird seems wonderfully tame; there is no need to speak or to stir; you may sit and gaze your fill on that solitary spot.

How innocently calm—now replete with patient tranquillity, the large

black eyes meet your eager gaze—how quiet the wild thing sits, every dusky brown quill and marbled feather in its place, and the long, grooved bill resting on the breast!

So full of abiding trust is the creature's cradled look, that, lost in admiration at her apparent unconcern, you scarcely think of the eggs concealed in the nest beneath. It is as if she had assumed that artless, unshrinking air on purpose to beguile you of the treasures, which, day and night, she so sedulously guards. You may even put forth your hand and touch her wing, and she will not shrink; but if by any species of subtlety you could place your finger on the breast where the plumage is worn from the skin, you might then feel a mother's heart beating hurriedly within, in spite of the seat maintained, the tranquil eyes, the composed and unruffled plumes.

So unstudied is the nest, composed as it is of a dozen stalks of grass and a few withered leaves, so fearless and full of faith to the end the attitude of the bird, that it is long before you can withdraw your eyes from the sight.

From how many hundred leagues in the far south has the woodcock flown, to hatch her brood at last in that chosen spot! For how many days and nights by that old grey stump—in sun, in wind and in rain—through how many dangers past—has she kept her post! How often has that little heart throbbed with fear as the hawk stole by on her hungry flight, or the stealthy fox on his midnight prow! How often have the winds beat and the floods came, and the house built by the stump withstood the shock! And who so sure of his own sympathies, as to make mock of the instinct, which, until the end is wrought, mysteriously binds the wing that has flown so so far, to this charmed atom of ground.

Now, call off your dog and go your way, humbled like a child be-



fore the smallest mystery of creation, yet devising, as you distinctively glance at the trees, what should be done with the market shooter, who for the sake of the extra shilling which game brings out of season, would kill this bird on her nest.

A little later in the season you are walking in the same woods. In a mossy and moist spot, shaded by the boughs of some gigantic tree, a bird suddenly flutters up and falls within a few feet to the right or left of your path. It is your woodcock; but never heed her now; be not duped by her innocent stratagems; bid Ponto come to a "down charge"; step carefully over the ground in every direction but that in which the pretended cripple would lead you: sharpen your eyes until you seem to see like a fly: Aha! you have them now; the rouges have chipped the shell; one, two, three; and see,

covered like the rest, with a brownish white down of the same hue as the withered leaf on which it skulks, see here is the fourth. If you lift them gently in your hand, listen to their feeble "peep peep!" touch their tender bills, and watch how shrewdly each tiny feeble urchin toddles off to hide behind the tendrils of a surface root, or an empty tortoise shell, you might almost take them for the children off the fabled Mossmen.

And yet so helpless do they seem in that solitary range of forest, that it appears almost a miracle they do not fall a prey to the snake, the raccoon, the opossum, and other voracious prowlers of the nights. But though feeble, they grow fast, and the same maternal care which kept its vigil so long on the nest, is now equally provident to supply and preserve the callow brood.

We have lived for years in a part of the state of Pennsylvania, where cocks have bred within the memory of men, and we have paid great attention to their habits, which are curious and interesting. Their nests are seldom seen in Pennsylvania before the fourth of April; the period of incubation is universally admitted to be twenty-one days, which, allowing a month for the growth of the young birds, will bring them far into May before they are fully fledged.

In the forests of Montgomery, Berks and Northampton counties, we have repeatedly found them feeding in detached broods—two, three or four young birds fully fledged, in company with the two old ones—near the last of May, and in the months of June and July, if the season be wet. When you first approach these insulated, marshy spots, the birds lie close, and if you are so disposed as the woods are pretty open and free from brush, you may easily make a double shot when they spring. After that it is useless to mark down the remaining birds, as they seldom admit the dog to point them a second time while under the influence of their first fears.

Pass on until you come to another piece of wet ground, when ten chances to one your dog points again, and another brood springs. It is absurd for writers to tell you that young cocks in July are only half-fledged, and may be knocked down with a pole. When flushed on the breeding ground, their first flight, through seldom protracted beyond one hundred yards, is sufficiently agile and vigorous to puzzle aught but a good shot to bring both birds down; indeed, we have known a young cock, refusing to lie a second time to the dog, to fly entirely through a piece of wood containing many acres, and take refuge at last in the middle of a rye-field.

Indeed, if for the purpose of observation and inquiry, you traverse

the woods at this period, you will be fully satisfied of the power of their flight, by watching the rapid and dexterous manner in which they dart among the surrounding tree trunks, very different from the lazy, listless way in which the old birds flap over a meadow in the glare of day.

In making these remarks we would by no means be understood to countenance cock shooting at this season of the year.

When thus harassed, the birds leave the woods and seek other quarters in the succeeding spring. They formerly bred abundantly in Haycock township, Bucks county; but some foolish fellow from Bethlehem, having laid a wager that he could kill a hundred birds in a day, in accomplishing this murderous feat, made cocks extremely scarce in this district for several successive seasons.

We were told by an innkeeper on the old Bethlehem road, that he saw this man count out ninety-six woodcock on his bar-room floor.

That they are much more abundantly diffused over the country, than their peculiar habits lead the inhabitants to suppose, there is no manner of doubt. Mr. Krider remembers well an old farmer residing near Moorestown, New Jersey, who, accidentally flushing cocks in his woods, procured a quantity of powder and shot, and being somewhat conversant in the art of pulling a trigger, in one day killed an almost incredible number, which he carried to the Philadelphia market, to the great astonishment of the hucksters.

The birds were in the habit of breeding in the same woods, and the old fellow well satisfied with his day's work, has been on the lookout for the long bills ever since; and it concerns us to state, to but little purpose.

In the summer of 1844, while visiting the breeding grounds, in company with a young friend he unfortu-



The other bird did not appear to miss his wild brother; perhaps, like bipeds without feathers he consoled his grief with the substantial reflection that he would now have the box and all the larve to himself. But this is scandal, for instead of becoming proud and politic, he grew more gentle and tame from day to day, and the reader has no idea as he increased in grace how he gained upon our affection. Without quirk or quibble, we fairly loved that woodcock. We had cause. He was certainly feeding on those unpoetical gournaments, who were ultimately destined to revel upon us, and he did this three times a day, in such an easy, *recherche* way, that we had no words to express our gratitude. The thing was too exquisite. It was really like carrying the war into the grim enemy's country. We kept him amply supplied and he fed equally well, when sharp set, at any period of the twenty-four hours.

Often when engaged in reading or writing at night, in our little apartment, we have paused to listen as we heard him moving about in his still, prying way, turning over the dead leaves and proving the crannies of the box in pursuit of his prey. When the bars were removed, he sometimes flew out, and after making a survey of the room—to ascertain, as we supposed, if a pet spaniel was present—invariably took a position close to our feet, which he was fond of playfully striking at with his long bill. This was slightly bent and protuberant at the middle of the upper mandible, giving him a strange and somewhat grotesque appearance.

nately shot a hen-bird, while engaged in performing those little interesting steps from the vicinity of her unfledged young. The brood, consisting of four half-grown birds, were preserved and carried to the farm house, where two of them were accidentally killed the same night. A box was procured, the bottom strewn with soft earth and dead leaves, strips nailed across to prevent the birds from escaping, and the next morning they were placed in their new abode. Being very wild and their bills tender, great care was required in feeding them, and it was necessary to cover the slats to prevent them from injuring themselves by fluttering up against the top of the box. The mode of forcing them to feed which we at first adopted, was to take them out of the box, open the bill and place the worm athwart, when, after a few ineffectual attempts, the birds took them down.

This plan succeeded well for a few days, when, to our surprise and gratification, one bird readily took his food from our fingers, and soon became so tame as to require no further handling. The other fellow continued as wild as before, and after giving us a great deal of trouble, when nearly full-grown received a tap on the head with a finger, which, to our unfeigned regret, killed it on the spot.

We have often watched this bird attentively, when he was engaged in feeding from surfaces of different depths and consistency, which had been purposely presented to him, after he was fullgrown. When his food was merely thrown out of a cup in the usual way, if not hungry, he would stand steadfastly eyeing the

coiling, twisting mass, waiting patiently until some of its component parts had disengaged themselves, and crawled under the dead leaves or into the angles or edges of the box; then slowly inserting the end of his bill into their hiding places, he drew them out one by one, and lifting them gently up, swept them into his gullet by a simple motion of the head and neck, and an almost imperceptible movement of the tongue. If his appetite was keen, however, he did not stand to parley, but attacked the mass pell-mell, striking and devouring each worm singly with astonishing ease and despatch, until his wants were satisfied or not a single individual remained.

Before he was fully feathered the worms could easily be observed twisting in his crop, as he sat dozing at his ease, like an alderman after his dinner. No doubt some of our delicate readers will regard this as rather an indifferent subject of remarks; but we assure them, without intending in the least to crack jokes, that the sight was nuts to us, and we were at a loss to invent means to glorify that woodcock.

The snake-bird—*Plotus Melanogaster*—which does not even eat snakes, by the way, and the secretary bird, which does—were mere gobbling creatures of instinct compared with him. He went to his feasts as scientifically and with as much gusto as Lucullus himself. It really seemed as if his whole tribe had owned the worms of the earth an irreconcilable grudge since the days of Adam.

Woodcock often return for successive seasons to the same spots to rear their young. This fact was long ago satisfactorily proved in England, and in Pennsylvania nests have been found for two springs in succession, beneath the same bush, on a piece of slightly elevated ground sheltered from the west winds by a woods. We have not the least doubt of the

identity of the inhabitant; in fact, this peculiarity is remarked in many other migratory birds of a more familiar nature. Wilson, the father of American ornithology, whose acuteness of observation was only equalled by his regard for truth and his unobtrusive modesty, repeatedly refers to it as not the least interesting among the habits of the creatures he was called upon describe.

The woodcock has been known to exhibit, under certain circumstances, curious symptoms of anger, somewhat similar to the pompous struttings of the turkey. On the twenty-fifth of August Mr. Krider was shooting in the mountains of Bedford county, Pennsylvania, birds being then numerous in this section of the country, when a cock suddenly flew up and alit within a few feet of the nose of his dog. It ran slowly before the animal, dropping its wings, spreading its tail, ruffling its plumage, and manifesting every sign of impotent rage. Mr. Krider was so surprised at these manoeuvres, never having seen anything of the kind in the woodcock before, that when it sprung at last he missed it with both barrels, and at the report of his piece, eight or nine birds rose close to him, in a small, swampy thicket where he started the first bird. From the fact of this bird being of unusual size, he was of opinion that it was a female.

To Be Continued

N e x t m o n t h : W o o d c o c k shooting in the "cripples" along the Delaware between the navy yard and the mouth of the Schuylkill—with bags of twenty to thirty cocks before nine in the morning quite common. Favorite spots in Montgomery and Berks counties described—as well as some in Delaware and New Jersey.



Improve Your Woodcock Hunting

By Steve Liscinsky

DID you ever wish there was something you could do to improve your woodcock hunting? And do you still yearn for the day when you will bump into a large "flight" of woodcock? Perhaps I can help. At least I can tell you how to get more fun out of the woodcock we have.

STEVE LISCINSKY is a Game Biologist in the Division of Research and is in charge of the Commission's Woodcock Study. He will soon complete this study which has embraced seven years. As a result of this work, Steve has become recognized as an expert on woodcock by Northeastern wildlife personnel.

To begin with we should understand what it is that limits the number of woodcock in a particular area. Past and current research studies show that there are two main factors which limit the number of woodcock, and which, at the same time, are controllable by man. These are habitat and hunting. All other factors are either minor or uncontrollable. In most cases where local woodcock populations have declined the pattern is somewhat similar. As the habitat improves and the number of woodcock increases, the hunting pressure builds up. About the time the bag begins to drop off the habitat is beyond its prime. Sometimes excessive gunning pressure drastically lowers a

population even while the coverts are at their best. It must be remembered that woodcock are birds of low breeding capacity and cannot hold up under excessive shooting. This is especially true where coverts are more or less isolated and small in size. In Pennsylvania this is very often the situation.

Let's take a closer look at these two factors—habitat first. How many of the good old "spots" you hunted fifteen or twenty years ago do you hunt today? Very few I'll wager, especially if they haven't been cut over, burned or grazed. No doubt the cover has changed. Or perhaps the cover still looks good, but there are few or no woodcock using it. What has happened?

The answer is simple—to a woodcock that is. He has either been over-harvested or his home has deteriorated. He survives better where there is little lead, moderate protection and much food, preferably earthworms.

Seriously speaking woodcock are the product of rather well-defined habitat. Although few and rather well defined, these coverts must contain certain essential elements. In order

to maintain a resident woodcock population, coverts must be of such type, size, and distribution so as to provide, (a) breeding grounds, (b) nesting cover, (c) feeding areas, and (4) resting or loafing areas. These requirements are usually met when an area contains (1) grassy or herbaceous clearings, (2) shrub or sapling patches and (3) soil containing an adequate supply of suitable, and available, food—preferably earthworms. The best of such areas are normally adjacent to streams, rivulets, and spring seeps. Good woodcock habitat may be found a few years following the abandonment of cultivated fields, the draining of swamps, or after fires or cuttings. The life of these coverts is rather limited, and their prime period may be very brief. Unless something is done to prevent these alder, aspen, hawthorn, and other type covers from growing into forests, they will soon be uninhabited by timberdoodles.

But—you say—the cover still looks good and it hasn't been over-shot, and there are still no woodcock. This reminds me of an incident which occurred on a farm where I worked

LOW BREEDING CAPACITY makes the woodcock vulnerable to excessive hunting pressure. Pennsylvania hunters should regulate their shooting habits to coincide with the number of woodcock in a particular covert. Don't over-harvest native breeding stock.





WOODCOCK COVER must provide breeding grounds, nesting cover, feeding areas, and resting or loafing areas. These requirements are usually met when an area contains grassy or herbaceous clearings, shrubs or sapling patches and soil containing an adequate supply of food—preferably earthworms.

as a lad. The farmer had a hobby of trading riding horses. One day a customer insisted on buying a sleek looking mare, without trying it out, and my employer acted hesitant, stating that he didn't think the horse "looked good." But the customer insisted and the trade was made. A few weeks later the buyer came back and stated that the horse was blind. Where upon the trader simply stated: "I told you the horse didn't look good."

And so it often is with woodcock habitat. You can't always tell by general outward appearances. You can have "good looking" cover, and little or no food in the soil beneath it. Or the food may be there but it is not available to woodcock. When soils are too wet or too dry, too acid or too alkaline, too sandy or too much organic matter or too anything, you have few or no earthworms. And, of course, in turn, woodcock seldom use the site. Then there are times when the supply of earthworms is adequate, but unavailable due to the thick mat

of herbaceous vegetation covering the ground. Don't think that a good feeding area can't be destroyed in one or two seasons without destroying its outward appearance. Witness the sandy deposits in many a previously good woodcock covert brought about by flash floods.

This brings to mind the results of feeding experiments conducted recently. Given a choice of feeding in sand, clay and loam, the captive woodcock chose clay first, loam second and sand third. Not only did they probe in sand least, but also they often refused to eat the worms they extracted from the sand. During the same study it was learned that woodcock need about three ounces of earthworms daily to maintain weight and vigor. In terms of numbers this means approximately twenty night crawlers or one hundred common garden worms. The captive woodcock also ate fly larvae, meal worms, grasshoppers (wings removed), slivers of venison, fish and luncheon meat. It was interesting to



BANDING STUDIES have been made on 163 Pennsylvania woodcock. The evidence strongly points towards the fact that locally reared birds are now providing the bulk of the sport in the Keystone State.

note that the latter three items were not eaten unless immersed in about $\frac{1}{4}$ inch of water.

Now what about the second limiting factor—hunting. Years ago it was thought that the bulk of the woodcock hunting was provided by so called “flight” birds; that is, woodcock migrating south from well-stocked breeding grounds north of Pennsylvania. This may have been true in the “old” days, but it is becoming more and more evident that locally reared birds are now providing the greater part of the sport. It is now thought that flight groups may be concentrations of local stocks or migrants from northern haunts.

That this is true is indicated by band returns. During the course of the Pennsylvania woodcock investigation 163 woodcock were banded. Fourteen of these have turned up in the hunters’ bag. Of the fourteen returns, eight were shot within a half mile of the original capture point, three within three miles, and three within eight miles. Twelve of the fourteen returns were from birds banded earlier in the same year, one from a previous year, and one from

two years back. One other woodcock was recovered outside the state. It was killed by a cat in South Carolina. Many of these returns occurred late in the hunting season—the last week in October and the first week of November. On the other hand there is no record out of several thousand woodcock banded outside the state being shot within the study areas, and, since 1950 only two returns of outside banded birds have been recorded in the state.

Numerous sportsmen claim that the word of “good spots” soon gets around, and it is not long until these spots are “pounded to death.” There is reason to believe that if all of the “native” or locally reared woodcock are killed out of a covert there may not be any birds to return the following spring to nest in that particular area. That woodcock return to the same breeding and rearing grounds has been proved time and again. Upon these returning birds depends the continuance and prosperity of local woodcock populations. If more than the annual increment is taken year after year, a point of no return may soon be reached.

Let us consider one more aspect of woodcock hunting. Woodcock are quite vulnerable to the gun, especially where coverts are restricted to small or isolated areas. They are rather easily followed, if not shot on the first rise, and eventually killed. Recent state-wide studies revealed that 40% of the woodcock flushed were killed. This does not infer, however, that 40% of the total population is harvested, even though, on occasion, local harvest percentages are much higher. On the other hand there are some good coverts which are seldom, if ever, hunted.

The question of future prospects is not infrequently asked. At present the pattern of land use in Pennsylvania is toward larger but fewer farms, toward increasing pasture lands and toward pole-stage and saw-log stage forests. This trend, gener-

ally speaking, indicates that we are gradually losing more woodcock habitat than we are gaining. In the face of growing populations and intensive land use, it becomes mandatory that we put more emphasis on the management of surviving coverts.

What is being done to insure the future of woodcock hunting? Probably more than you think. Woodcock habitat improvement techniques have been developed and are now being tested on several State Game Lands. Studies on the effect of gunning pressure are also in progress. Seasons and bag limits are being carefully studied in conjunction with production inventories. Other basic studies are conducted in various states. The Fish and Wildlife Service continually watches over the long range trends.

These are but a few of the pursuits conducted by wildlife workers on this upland shorebird. Progress is surely being made, and there is little reason to doubt that we cannot perpetuate the woodcock and the fine sport it provides for future generations of hunters.

Here are a few suggestions to enable you to get more enjoyment and sport from your woodcock.

1. Become more acquainted with woodcock habits and habitats. Observe them throughout the seasons—spring through fall. If you haven't observed woodcock courtship behavior there is a treat in store for you. Ask anyone familiar with this activity to show you. Such observations can also give you an index of woodcock numbers in your favorite areas. Dusk flights, without the typical courtship displays, are not uncommon during summer months. These twilight flights, coupled with trips afield throughout the season can help you in determining prospective hunting spots. Except during

droughty periods woodcock habitat preferences change little with the seasons. As droughty conditions worsen, however, cool, moist areas become more scarce and woodcock become more concentrated. Keep in mind the basic habitat requirements mentioned earlier.

2. Regulate your shooting habits to coincide with the number of woodcock in a particular covert. This is difficult, but remember—you may be shooting the last few local birds from a particular area. Know your coverts and don't begin shooting until you are fairly sure you are not pursuing the remnant stock. A good rule to follow: shoot only those birds pointed by your dog until you are satisfied there are enough birds in the area to warrant more shots.

Another tip on hunting. The last week of October and the first week of November are usually the best times to find concentrations of woodcock. At this time local birds are concentrating for migration, and there is better possibility then to discover large flight groups from farther north. Incidentally, the largest flight groups, suspected to be far north birds, have been observed in the second week of November in recent years.

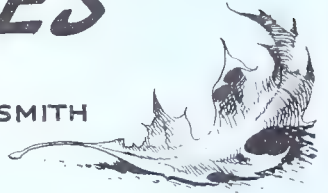
3. Try a little habitat improvement work yourself or talk a local group of sportsmen into helping you. In many cases a minimum of work will render great benefits. To guide your work remember the basic requirements already stated. For more detailed instructions contact the Game Commission.

In conclusion I would like to suggest that you keep that dog and gun you were going to get rid of—there is a future for woodcock and you. You too can help—support the program and perpetuate the enjoyment offered by this unique game bird.



WALKIN' SHOES

By NED SMITH



A Sack of Nuts

1. What is another name for the "white walnut"?
2. What common Pennsylvania nuts grow on bushes?
3. Which nut tree yields the most popular wood for gun stocks?
4. The wood of what group of nut trees is commonly used in the manufacture of tool handles?
5. What two native nuts are protected by sharp spines?
6. What nut is enclosed in a sticky, hairy hull?
7. Why is the shellbark so-called?
8. What Pennsylvania nuts are closely related to the filbert?

BUYING a can of walnut meats in a city supermarket might be convenient, but it can't hold a candle to a good old-fashioned nut gathering expedition. On these golden October mornings hickories are dropping bumper crops along the creek bottom. Walnuts lie beneath the trees like cobblestones. That fencerow along Farmer Snyder's hillside pasture is a thicket of hazel nut bushes. There are even a few chestnut sprouts of bearing size scattered about the woods, if you'll just get out and look for them.

Some nut trees are found in wooded areas while others grow in meadows and fencerows, but wher-

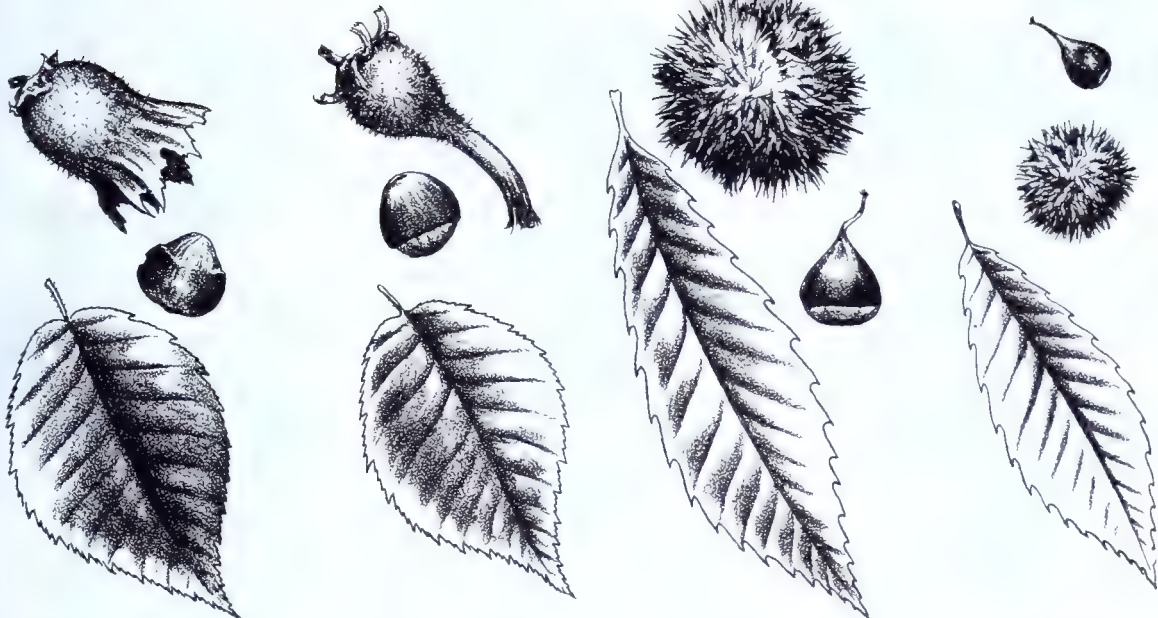
ever you find them be sure to ask permission of the landowner before helping yourself. Don't overlook the fact that he might be just as fond of walnut cake as you are, or that he might consider nuts a cash crop.

Hull your nuts as soon as you get them home and spread them out to dry. Neglecting to do this will oftentimes lead to their molding or turning rancid. And be sure they're kept out of reach of squirrels and other small rodents.

To be certain you don't miss any of the good ones, or lug home a bag full of poor ones, here's the dope on what you can expect to find in Pennsylvania:

Black Walnut—Although these trees frequently grow in the woods, those bearing the largest nuts are usually found in fertile bottom lands. Look for a large tree with dark brown, furrowed bark. Because it drops its leaves earlier than most trees, the walnut in October is quite bare and the ground beneath it is strewn with fallen leaves and blackening nuts.

The leaves are a foot or two long, consisting of an average of fifteen leaflets. The nuts are round and sharply furrowed, the largest attaining a diameter of two inches or more. They are covered with a thick green husk that turns black after



AMERICAN HAZELNUT

BEAKED HAZELNUT

CHESTNUT

CHINQUAPIN

dropping from the tree. The kernels are large and flavorful kitchen favorites. No other imparts the same full-bodied flavor to cakes, cookies and candy.

The wood is dark brown, and on slow grown trees is hard and close-grained. It is unsurpassed by any other domestic wood for gun stock material, and is one of the most popular and valuable of cabinet woods, both for veneers and solid construction.

Butternut—The butternut is an inconspicuous tree of the forest, most readily identified in October by its rather smooth light gray bark and bare branches.

Like the black walnut, it bears compound leaves of numerous leaflets. The nuts are oblong, longitudinally scored with deep furrows and armed with sharp ridges. The thin green hull is coated with sticky hairs. The nut meats are oily and mild flavored, and are particularly desirable for use in cookies.

In contrast to the black walnut, the butternut or "white walnut" produces a light colored wood that is quite inferior to the former. It is, however, used to some extent in furniture.

Beech—Actually, the beech nut is rarely sought because of its small size

and the infrequency with which it bears. Nevertheless, it is an extremely tasty little nut and the largest are well worth harvesting, if only for an occasional nibble.

Because of its smooth gray bark the tree itself is one of the most distinctive in the forest. In the winter-time its persistent pale colored leaves make it quite conspicuous among its leafless neighbors.

Beech leaves are borne alternately on zig-zag twigs. The leaf buds are long, slender, and sharply pointed.

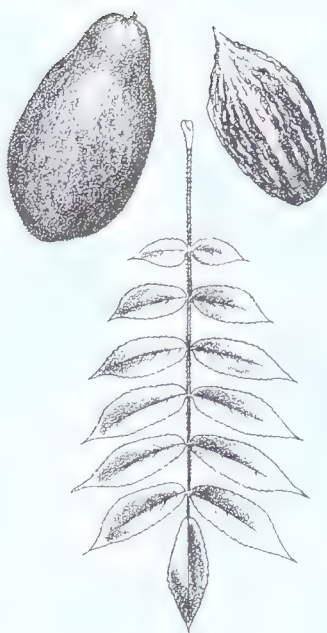
The nuts are small and triangular in cross-section, enclosed in pairs in a burr that is covered with soft, curved spines. Turkeys, squirrels, chipmunks, deer, bears, mice, and bluejays are so fond of these tidbits that the human nut-gatherer is often left holding the bag—literally.

Beech wood is hard, strong, and close-grained. It is difficult to season without checking, but once properly dried is a good wood for wooden ware, flooring, and the like. It is much more widely used in Europe than in our country, although the scarcity of better American woods is influencing its utilization.

American Hazelnut—Forming dense thickets in overgrown fencerows and similar places, this sturdy shrub often goes unrecognized and its nuts



BLACK WALNUT



BUTTERNUT



BEECH

unharvested. The leaves are hairy beneath, as are the twigs. The nuts are borne in clusters at the ends of the twigs, encased in leaf-like bracts. Spherical, somewhat flattened, and hard shelled, extremely large ones measure about $\frac{5}{8}$ inch across. The kernel is crisp and delicious, as might be expected of an American relative of the European filbert.

Beaked Hazelnut—The beaked hazelnut differs from the American hazelnut in having a tube-like bract enveloping the fruit. The nuts are practically identical.

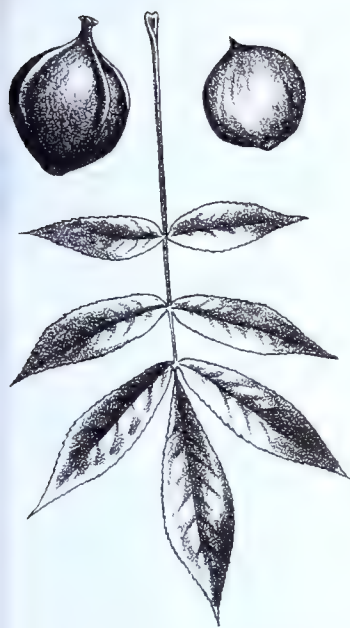
Chestnut—To young Pennsylvanians a chestnut tree is a gray crumbling skeleton in the woods or perhaps a puny sprout growing from an ancient stump. Older folks, though, remember the chestnut as a living giant of the forests beneath whose boughs they reaped many a harvest of sweet brown nuts. The terrible chestnut blight began shortly after the turn of the century and by the early 1920's scarcely a mature tree was alive in Pennsylvania. Were it not for the fact that the stumps continued to produce sprouts the American chestnut would now be a thing of the past. Such new shoots frequently attain bearing size, but all eventually succumb to the disease

that struck down their progenitors.

The chestnut leaf is long and acutely pointed at both ends and the margin is coarsely serrated. From one to three shiny brown nuts are enclosed in each burr. The latter are several inches in diameter and are thickly covered with stiff needle-like spines. The first good frost usually opens the burrs, but in exceptionally mild autumns they reluctantly release their fruit when the time comes without Jack Frost's urging.

Chestnut wood is soft and open grained. It cuts cleanly and at one time was popular for interior finishing. Its good splitting qualities and resistance to rotting made it a first rate wood for fence rails and posts. Every camper knows that it makes a quick, hot, clean fire, although it cannot be trusted not to throw out a spark or two when a fellow's back is turned.

Chinquapin—This tree looks like a small edition of the chestnut. In Pennsylvania it is shrub-like in proportions. Its leaves resemble the chestnut's but are little more than half as large. The burrs, too, are small, generally housing but one nut. As might be expected, the nuts are about half the size of those of its larger relative, although in flavor they are not inferior.



BITTERNUT HICKORY



PIGNUT HICKORY



RED HICKORY

Were it not for its limited distribution—being found only in scattered locations in the southern part of the state—it could be of considerable importance at least as a wildlife food, for it is highly resistant to the chestnut blight.

Shagbark Hickory—Although the name correctly belongs to another relative, in Pennsylvania this tree is commonly called the shellbark. Either name alludes to its hard gray bark that splits into long plates that partially separate from the trunk. Its leaves are compound, usually consisting of five leaflets. The overall length of the leaf is generally less than 12 or 14 inches.

The cream-colored nuts are nearly round and noticeably flattened. They are marked with four raised ridges. The spherical hull is about $\frac{1}{4}$ inch thick and splits into four sections on maturing.

The wood of the shellbark, like that of most other hickories, is extremely hard, tough, and close grained. It is unexcelled for tool handles and similar articles, and as fuel it is tops. It can be burned when green and will produce a quantity of long-lasting coals.

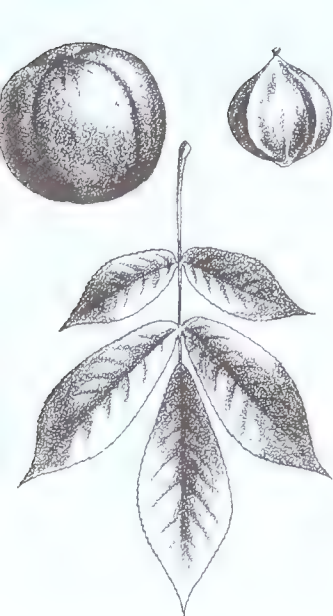
Hickory smoke has long been famous for imparting an unbeatable

flavor to home cured hams and bacon.

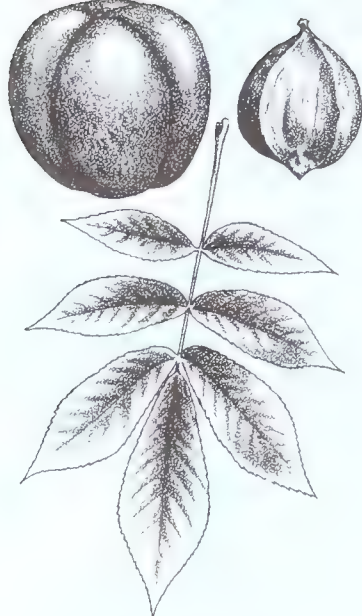
Shellbark—While closely resembling the shagbark hickory this species can be identified by several characteristics. For one thing, its leaves are generally longer than 12 inches and usually contain seven leaflets. The nuts are larger and are more or less pointed at each end. Flavorwise they are excellent but are more troublesome to crack than the shagbark due to their thicker shells. Shellbark trees are generally found growing in low and oftentimes wet locations, seldom in the hillside locations commonly frequented by the shagbark hickory.

Mockernut Hickory—The eager nut collector who falls upon this one with great expectations is due for a disappointment. The thick husk and general shape of the nut resembles the esteemed shagbark nut, but the shell is thick and defies all but the most determined efforts to crack it. The reward, a sweet but disappointingly small kernel, seems hardly worth the effort.

The mockernut's bark does not become shaggy like that of the two preceding species. Rather on mature trees it is roughened by fissures and interlacing ridges. Another clue to its identity is the fact that the under-



SHAGBARK HICKORY



SHELLBARK HICKORY



MOCKERNUT HICKORY

sides of the leaflets and the leaf petioles are densely hairy.

Bitternut Hickory—The bitternut hickory has leaves of five to nine leaflets that are somewhat hairy underneath. The gray bark remains smooth until the tree is quite old, when it cracks into shallow fissures and ridges. The nut is small, nearly spherical, thin-shelled, and *bitter*. One sampling will result in the remainder of the crop being left for the squirrels—if they'll eat them! Sharp-edged ridges mark the lines of separation on the thin, yellowish husks.

Pignut Hickory—This hickory can usually be identified by its fruits, the hulls of which are pear-shaped and lack the prominent ridges of the bitternut. At maturity they split midway to the base.

The nuts themselves are nearly globose, the shells thick and seldom ridged, and the nut meats are generally somewhat bitter.

Red Hickory—This tree is sometimes known as the oval pignut. Its bark is inclined to be shaggy, sometimes approaching the shagbark in appearance. The nuts are thin-shelled and nearly spherical and contain kernels of good flavor. They are encased in a thin hull that splits to the base when ripe.

ANSWERS TO THE QUESTIONS

1. Butternut
2. The hazelnuts
3. The black walnut
4. The hickories
5. The chestnut and the chinquapin
6. The butternut
7. Because of the thin, partially free plates of bark on its trunk
8. The hazelnuts

PENNSYLVANIA HICKORY NUT CONTEST

The Pennsylvania Nut Growers Association in cooperation with the Department of Horticulture and Department of Agricultural Extension of Pennsylvania State University is conducting a state-wide Hickory Nut Contest this fall. The purpose is to locate superior quality hickory nuts which could serve as a source of future seed and scion wood. Cash prizes are being offered for winning entries. Judging will be done at the University and the prize-winners will be displayed at the Pennsylvania Farm Show. Contest closes November 15th. Additional information and official entry blanks may be obtained from: George G. Weber, 748 South Queen Street, York.

WELCOME

THESE 830 ACRES ARE FOR YOUR ENJOYMENT

Hunting, Fishing, Hiking and Nature Study Permitted

It is **ABSOLUTELY UNLAWFUL** to trespass for the purpose of destroying or removal of any trees, wood, soil, shrubs, evergreens, plants, or wildflowers, or the dumping of rubbish on these premises.

Under the penalty of the law, \$10.00 to \$500.00 fine according to Section 811 of the Act of June 24, 1939, P. L. 872 and Section 954 of the Act of June 24, 1939, P. L. 872, the Penal Code as amended by the Act approved May 21, 1943, P. L. 306.

Trapping, Camping, Building of Fires by Permission Only

Please Help In The Interest of Wildlife Conservation

Owners: B. L. SHARP
W. M. LIGHT
Lititz, Penna.

WELCOME? It's Up To You!

By John R. Helter

"SURE I read the sign! The damn thing said Welcome, didn't it?"

"You didn't read the sign," the landowner insisted, "but you're going to or I'm going to have you arrested for stealing."

The two men proceeded to walk to the dirt road that bordered the land.

The sign did say "WELCOME" in two inch high letters. Beneath this unusual head it said, "These 830 Acres Are For Your Enjoyment. Hunting, Fishing and Nature Study Permitted. Trapping, Camping and Building of Fires by Permission Only. Please Help In The Interest Of Wildlife Conservation. Owners: B. L. Sharp; W. M. Light, Lititz, Pa."

The fellow with an evergreen in each hand, sheepishly hung his head, then headed for his car.

Landowner-sportsmen relationship is probably the most important single factor in the future of hunting in Pennsylvania.

There is no doubt that food and cover are necessary to better hunting. But, stop and think! Of what need is food and cover if there isn't any place to hunt?

Shortly before hunting season I drove the country side viewing the white posters that seem to grow on fence posts and trees everywhere. These signs proclaiming private land, and refusing admittance to trespassers, become more numerous each year.

I shudder as I visualize myself, feebly rocking away, with my grandchildren gathered around me. "Yep," I'll have to say, "I can remember when you could hunt almost anywhere without paying."

They will probably listen with disbelief, as I listened when old-timers told me how they could hunt all day, in any direction from town, without seeing a No Trespass sign.

It was while taking one of these



FISHING POND is one of the attractions to this unique area, privately owned but open to the public—at least those members of it who have the decency to respect the land-owners' property. Picnic tables and shelter have also been constructed for the use of visitors.

“open-land-hunting” journeys, that I came upon this story.

I was in the area just north of the City of Lancaster, where Lancaster County meets Lebanon County. The narrow dirt road followed the Hammer Creek as it wound through the colorful hills. The land on both sides of the road displayed white posters every hundred feet. As I caught glimpses of the stream I wondered how many lunker trout lurked in its waters.

The road crossed a small bridge and I stopped to get a good look at the stream. I glanced at the poster, prominently displayed beside the only parking space in the area.

My eyes bugged and my mouth fell open! The sign said, “Welcome,” etc., and was signed by B. L. Sharp: and W. M. Light, Lititz, Pa.

Bill Light is in the landscape business by vocation and a bird and nature lover by avocation. Bart Sharp owns and operates a Photo Supply Shop, for a living but claims nature study, a bit of hunting and fishing and photography as his hobbies. And,

he can boast many years service as a Deputy Game Protector for the Game Commission, starting in 1929.

The two men purchased the land in 1951, with the idea of keeping the land wild and natural and leaving it open to the public to enjoy as they themselves enjoy it.

The idea of the “Welcome” signs was fostered, with the thought that surely anyone invited to use their land would respect it. Even an offer of \$500, to lease the hunting and fishing rights for a year, was rejected in favor of keeping it open to the public.

The two men purchased evergreens, rhododendron and other trees and shrubs to replenish the supply that grew wild on the tract.

A power saw was purchased. Then with the help of members of the Cornwall Sportsmen's Club and members of the Lititz Sportsmen's Association, trees were felled and dragged into the creek. Stone diverters, V-dams, waterfalls and other formations were placed in the creek. All this was done with the thought of better

cover for the fish and better fishing for the fisherman.

An old walk-in milk delivery truck was purchased and set on a small foundation along the stream. The inside was remodeled into a fishing camp, complete with stove, cooking utensils and dishes. The door was closed but never locked and a sign written on its side, invited the public to use it.

The area is a coon hunters dream. Old den trees were protected and the coon dog owner need never fear that his dog may step into a trap on this land.

The land is bordered on the east by Route 501. Here, where the headwaters of Furnace Run cut across the corner of their property, the men constructed a pond and stocked it with bass and blue gills.

Later tables and fireplaces were built and parking areas were provided. The use of this picnic area was free. Boy Scout troops used the land to camp and had sites donated to them for their permanent use. Riding clubs and hikers used the land as they followed the famed

Horse Shoe Trail which crosses the 830 acres.

Just how did the sportsman, the picnicker, the hiker and the nature-lover accept this offer to share, free of charge, the efforts of God and man to create and preserve an area of such proportions?

Scores of signs plead with visitors not to pick wildflowers. To perpetuate themselves, wildflowers must bloom to go to seed. They are annuals, and if picked before the seed has fallen cannot reproduce. Many species are now gone, some of which were re-introduced after being originally destroyed by those who must pick every wildflower they see.

Some of the welcome signs have been blasted with shotgun fire. Parking areas are in a constant state of litter. The picnic grove was littered to the extent that a charge had to be made to cover the cost of removing the trash. Cans, bottles and other types of "junk" are removed from the Hammer Creek regularly.

The evergreens and rhododendron bushes have disappeared. Only the holes where they grew, give evidence

LEBANON SCOUT TROOP enjoys use of the land for a campsite and even had areas donated to them for their permanent use. Riding clubs and hikers also use the Horse Shoe Trail which crosses the area.



that some happy fellow "found" them and replanted them where they could better be appreciated . . . by himself.

The milk-truck-fishing-camp was destroyed by gun fire. All the windows were shot out and the inside looted.

The dumping of trash, in hollows along the road, proved to be the most disgusting of the many abuses piled upon these two men. Time after time boxes and bags of tin cans and other trash had to be cleaned up. The No Dumping signs had to be replaced every few weeks.

"We were after this one fellow for over a year," Bart said. "We were sure it was the same party each time. The labels on the cans were always the same brands and milk cartons showed the party was from the Lebanon area. The only other clue we had was a handful of papers with the first name of a youngster named Jimmy. It was the next year, when Jimmy learned to write his last name, that we traced the name and found Jimmy's Daddy."

ABUSE OF A PRIVILEGE is typified by piles of rubbish and litter which were found along the road. Just a few of the many that use the land abuse the privilege but the owners would have to spend half their time cleaning up the litter and patrolling to prevent such poor outdoor manners.

To date the landowners have successfully prosecuted half a dozen or more dumping violators.

"It's now at the point where we would have to spend half of our time cleaning up litter or patrolling the land," said Bart, "and we're getting tired of it."

"We realize there are just a few people, of the many who use the land, who abuse the privileges we allow," said Bill Light. "Even these people could be stopped if we got any help."

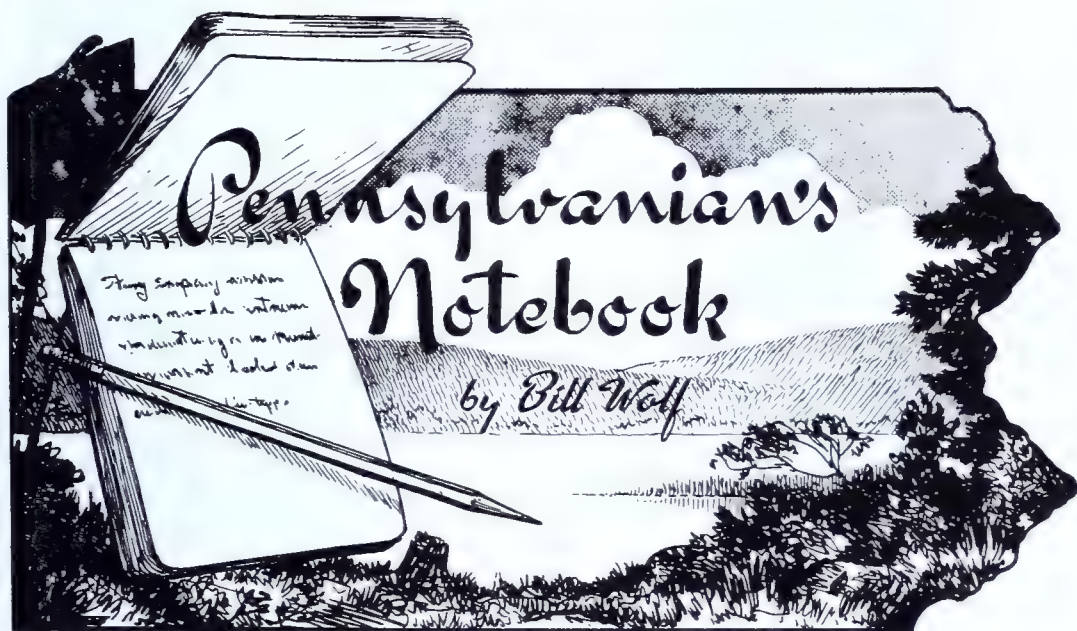
"Time after time we have asked sportsmen to help us by just reporting the violations they see. They won't seem to cooperate," Bart said.

"But then it's the same way with Game Protector work. Until every true sportsman reports every violation he sees, public hunting and fishing lands will decrease each year," he concluded.

There's the land owner's side of the story!

It's not the other fellow's problem, it's *yours*.





Pennsylvanian's Notebook

by Bill Wolf

THIS is not exactly a cook's tour of Pennsylvania, because a number of things that will be mentioned involve no cooking. Neither is it another discussion of edible wild plants, which have been treated capably in this publication by several writers, but some such plants will be brought up. Actually, it is a kind of eaters' tour of Pennsylvania, past and present, with some emphasis on the past to show the present what it was like.

No graybeard myself, my own memory spans only part of the years in this century, but I can stretch that memory back into the past century by recalling things that I learned from my grandfather. He has been mentioned here before, and will be again, because I realize now what I didn't know until after his death in the mid-Twenties—that he gave me a flying and practical start in outdoor living. I was his most constant companion afield in my early youth, and he was a born, but untutored, naturalist as well as a hunter and angler.

His name was Emanuel Emig, and he was nicknamed Manny as were most Emanuels of his day. He spent

his early life in and around Spring Grove, farming, digging iron ore, fishing and hunting. Later, I was to fish the paper mill dam at Spring Grove with him, and go along when he fished and hunted at Hanover Junction where one of his brothers, Jake, lived. This was long before I was big enough or old enough to carry a gun, which age wasn't reached until he bought a rundown farm in the Conewago Hills and moved out from York where we had been living with him, my father being an invalid at the time. We had a carefree, hillbilly sort of existence on this farm since so little of the land was under productive cultivation that we had plenty of time for hunting, fishing, and plain tramping around the hills. It was so primitive a farm that I actually learned to use a cradle to cut the wheat and helped flail it out on the barn floor, something that few persons of my generation have done.

My life there was a continuation and expansion of earlier lessons in outdoor living. I knew more then, because it was daily routine, than I do now about local trees and wood and the uses to which they were put,



just for example. I have forgotten much, but enough stuck to make the outdoors more enjoyable for me today. And I listened when the older men and my grandfather talked about hunting dogs (rabbit, raccoon and fox hounds then because the only game birds we knew were a few coveys of quail), about hunting, fishing, and boasted of their own shooting prowess.

The only time I didn't listen was when they talked entirely in Pennsylvania-German because I could understand only a few words. I recall doing the same thing when much younger at Stambaugh's Cafe which used to be on the Square in York. This was shortly before Prohibition and I was about seven or eight years old. When there was no fishing or hunting trip over the weekend, my grandfather followed a set Saturday routine. He would dress up, take a big basket and we would walk downtown to do the weekend grocery shopping in the markets. Then we would take the groceries home, and start out again on our own. This invariably meant a trip to Stambaugh's where my grandfather and his hunting-fishing cronies would talk over their beers, then we would go to the early vaudeville show at the Opera House, and so home.

I listened and learned until they switched into Pennsylvania "Dutch" whereupon I would visit the free lunch counter and eat the cold cuts, cheese and fried oysters stacked up there, and study every minute and gory detail of the painting "Custer's Last Stand." This is no defense of the oldtime saloon, but I do not remember ever seeing any rowdiness, or hearing bad language or violent arguments, other than friendly and sometimes noisy debates about the respective merits of various kinds of dogs and guns. An odd sort of upbringing for a boy, perhaps, but I learned a lot about the "old days" as these men knew them. The only scars it left upon my soul were put



IN MEMORIAM

William E. (Bill) Wolf, free-lance magazine writer and former newspaper columnist, died July 26th in the Pennsylvania Hospital, Philadelphia, Pa. Wolf, who was 49, was a frequent contributor to the **PENNSYLVANIA GAME NEWS**, as well as the **SATURDAY EVENING POST**, **SPORTS AFIELD** and **FARM JOURNAL** magazines. He had been a columnist on the Philadelphia Record for fifteen years until it ceased publication.

Mr. Wolf, who was born in York, Pa., began his newspaper career with the Gazette and Daily in York in 1925, first as a reporter and then as telegraph editor. He was considered somewhat of an expert on Canada and on cooking and had authored a book "Reveries of an Outdoor Man."

Surviving are his wife, Margaret McFadden Wolf; four daughters Mrs. William O. Ricker, Collegeville; Mrs. A. Philip Johnson, Tokyo, Japan; Margaret and Sarah Ann of Upper Darby, Pa.

Private funeral services were held on July 28 with burial in Mount Rose Cemetery, York, Pa.

there by too much sarsaparilla and root beer and free lunch.

Sundays during such seasons when there was little doing in the hunting and fishing line were spent in long hikes through the country, gathering some of the earth's wild products, or just looking around.

From all this came some knowledge, too, of foods, some of which are almost forgotten today, or which never were part of the standard American diet, even in early times. Let us start with one of the latter in taking up the different foodstuffs separately.

TRUFFLES—My memory falters a bit here because everything happened a long time ago when I certainly wasn't interested in truffles for cooking, and, indeed, hadn't even heard of them by name. Truffles, of course, are the tuber-like fungi that grow underground and are used in cooking by expert chefs and amateurs. Those used in this country are imported from France (they also are found in Great Britain and Italy), and are extremely expensive in the United States, whether canned or flown across the ocean as fresh truffles. There are several different kinds. The best, from France, costs about one dollar per ounce in a tiny can.

They are found beneath the surface of the soil, usually by pigs or dogs trained to locate them. Squirrels also hunt them, but I wouldn't care to train a squirrel to do anything. The pig and dog truffle hunters like the taste of them, but are usually rewarded with a small piece of cheese when they make a find because the truffles are so much more precious. They resemble small black or dark brown potatoes, and in Germany they called them *Tartoffel*, which is somewhat similar to the German for potato, *Kartoffel* (*grumbier* in Pennsylvania "Dutch.")

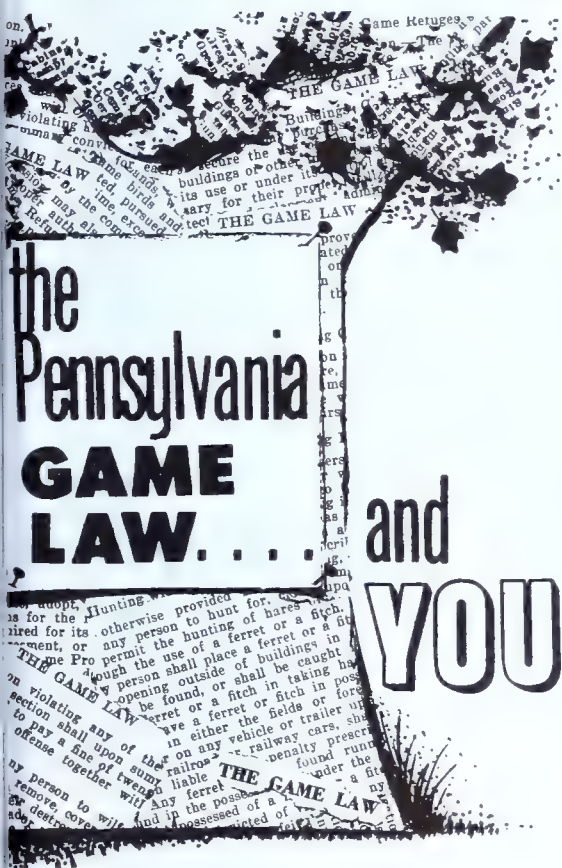
In recent years there have been reports of good-tasting truffles (there

are several kinds in Europe and they vary in flavor) being found here in eastern United States. These reports usually are vague and unconfirmed because such a find would be like locating a small gold mine, and the man making it would be secretive, but I do know some truffle hounds have been imported from Italy.

I am certain of this much, though. I recall my grandfather grubbing in the ground to find a small, dark, tuber-like thing which he said had a good taste and added flavor to cooking. I do not remember him ever giving it a name. We invariably dug in oak groves, to the best of my memory, which agrees with where they are found in Great Britain and Europe, in oak, birch and beech groves. He used whatever it was he found in a manner chefs probably would consider barbarous, sliced in soups, stews and other farm dishes—exactly, I imagine, as the European country people used truffles long before they became fancy food. Curious thing, but most of the truly great foods and dishes of the world are only some chef's modification of country farm cooking.

It would be interesting and profitable to locate an American variety of truffles in Pennsylvania, and I believe it could be done—but it would require a lot more studying of the subject than I am able to pass on from my own meager knowledge of it, and a lot of plain, hard work.

EDITOR'S NOTE: This is an unfinished article, found in Bill Wolf's desk following his untimely death. Written especially for **GAME NEWS**, the manuscript was among the last of Bill's articles. A handwritten outline for the article found with the typed pages indicated he was going to include much more information on edible plants found in Pennsylvania outdoors along with more of his early day experiences roaming the hills of York County.



the Pennsylvania GAME LAW.... and YOU

I nodded. By that time the bird had gone anyway. Someone else, farther down the marsh, shot it down and was promptly arrested by the Game Protector.

For the sportsman, when not to shoot may be more important (financially, anyway) than when and where and how to bring the quarry down. Not to mention that a revocation may put him right back to television watching.

Every State tells the hunter when he may hunt, what he may hunt, and how much game he may kill. In some States the seasons and bag limits are closely controlled by law. In Pennsylvania, a more flexible policy places that discretion in the hands of the Game Commission.

The only limitation is that a standard schedule of seasons and bag limits is provided in the Game Law in the event that the Commission fails to act. Since it has not yet failed to act, this stand-by schedule has never been used but remains as a safeguard should the Commission, for any reason, fail to agree upon and

Don't Shoot the Sawbuck Bird

By John Sullivan

Deputy Attorney General

FOUR OF A SERIES

ONE chilly and gloomy day I was being introduced to the delights of duck hunting. With ducks few and far between after the first early-morning flurry, my trigger finger itched at the sight of a big wing-flapping bird that leisurely soared up and down past our blind. It was just about my speed.

"Don't shoot," my duck-veteran partner warned. "That's a sawbuck bird."

I looked confused.

"Protected. Ten dollars fine."

promulgate the necessary regulations.

The Legislature's grant of authority to the Commission in Section 501 is so sweeping that it is worth repetition in full.

"After investigation or information otherwise obtained by the commission, as to the annual game supply, the commission may, by appropriate rules and regulations, a summary of which shall be published as hereinafter specified, fix seasons, shooting hours, and daily, season and possession limits, or re-

move protection and declare an open season, or increase, reduce, or close seasons, or increase or reduce bag limits, for all species of game birds and game animals throughout the Commonwealth, or in any part thereof, or limit the number of hunters in any designated area and prescribe the methods of hunting therein, when in its opinion, such action is necessary to assure the maintenance of an adequate supply of such species, or when an unbalanced sex ratio exists which in its opinion should be corrected, or when, in the opinion of the commission, such additional open season will not jeopardize the future supply of game."

It should be noted that prohibitions against the killing of game are subject to the exception that they do not apply if the killing is done in defense of person or property. The Commission's discretionary right to set seasons and bag limits was upheld as Constitutional, and not an

ONE SAWBUCK BIRD is the great blue heron, protected by both State and Federal laws. For the sportsman, there is no excuse for killing such a large and conspicuous creature.

Karl Maslowski Photo



unlawful delegation of legislative power, in *Commonwealth v. Stoner*, 28 D. & C. 489 (1937). In that case the Court also ruled that the Commission was not required to specify its reasons.

Antlerless deer seasons are subject to special legislative provisions, representing an outgrowth of extensive controversy. The Commission has power to declare such seasons at its discretion. A special license is required, which must be obtained from the county treasurer in the county where the sportsman wishes to hunt. There are no State-wide doe licenses. The Commission determines how many licenses may be issued in each county, depending upon the number of antlerless deer it wishes killed, to bring the herd into balance. Pennsylvania residents are given first choice in getting the licenses, non-residents getting theirs only during the last 30 days before the antlerless deer season opens. Farmers are permitted to shoot antlerless deer without license under the same conditions prevailing with respect to other game, namely, on their own property or on that immediately adjacent if they have the owner's permission. It is worthy of note that "farmer" in the law means one who actually lives upon and cultivates the land.

The law also provides that whenever there is a regular deer season, there shall also be a special season during which deer may be taken only with bow and arrow. A special two dollar license is required, in addition to the regular hunting license.

Migratory game birds are required to be taken in accordance with the Federal Migratory Bird Treaty Act regulations, which are made a part of the Game Law, and such other regulations as the Game Commission may prescribe.

Trapping of game birds, with Commission approval, is permitted for the purpose of keeping them over the winter or of separating coveys to



PENNSYLVANIA ELK are given full protection by law and there has been no open season on them in the Keystone State since 1932. For illegal killing or possession, the penalty is \$200 and at the court's discretion, six months in jail.

improve propagation, but not for any other purpose.

Actions of the Game Commission relative to seasons and bag limits are required to be advertised for at least two weeks in two newspapers in any affected county.

Upon conviction for violation of the parts of the Game Law we have been discussing, penalties are both severe and mandatory under the law. For illegal killing or possession the penalty is, with respect to elk, \$200 and at the court's discretion, six months in jail; deer \$100, bear \$200; wild turkey, ruffed grouse, ringneck pheasant, quail, partridge or woodcock, \$25; raccoon, \$25; other bird or animal, \$10. Keep in mind that this is for *each* animal or bird. You will note that the "sawbuck bird" is the cheapest bargain in illegal birds that the Game Commission has, and that even possession of a small chunk of

illegal deer can cost \$100. For unspecified violations, or for violating Commission regulations, the fine is \$25. For second offenses the schedule of fines is the same, except that the court in its discretion may add to the sentence one day in jail for every dollar of fine.

The general powers of the Commission in Section 501 were held broad enough to authorize a doe season in the case of *Lehman v. Game Commission*, 34 D. & C. 662, 1939. The Court held that ownership and control of game resided in the Commonwealth in its sovereign capacity, and that legislation to conserve it may include a broader delegation of power to administrative agencies than legislation involving private rights. "The wisdom of the regulations may not be attacked and reviewed . . ." said the Court, "without showing some material disregard

of the limitations or some abuse of discretion, arbitrary or capricious," because the Commission's orders were "no more open to trial than the legislation authorizing them."

An amusing case dealing with illegal killing of game involved the "mercy killing" of an elk which had been hit by a train (*Commonwealth v. Learn*, 2 D. & C. 397, 1922). The Court found that it was not unlawful to put the animal out of its misery. As to the two elk teeth found in the killer's possession, the tongue-in-cheek court suggested that if the Commonwealth owned them in its sovereign right it could recover them or their value in a civil suit.

While that particular appeal succeeded, attempts to "beat the rap" on technical grounds have not been too uniformly successful. Probably the one that got farthest was the early case of *Commonwealth v. Clinton*, 38 Pa. Super. 573 (1909), where a defendant went all the way to the Superior Court with an argument that he should not be convicted of illegally killing a deer in Pennsylvania because the information didn't specify the county where it was killed. The Court pointed out that the information was headed, "Commonwealth of Pennsylvania, County of Chester," and charged illegal possession in Chester County of parts of deer. That, the Court said, was quite sufficient. Judicial notice could be taken of the fact that Chester County is part of the Commonwealth of Pennsylvania.

The great store that hunters put by their right to hunt in Pennsylvania is illustrated in revocation cases. Caught in the field, few hunters put much of an argument and most settle at once on field receipts. But later, when the case comes before the full Commission and a suspension is ordered, the lawyers' telephones start

to ring. Even hunters who have admitted their guilt and paid fines on field receipts have a change of heart when the revocation notice arrived in the mail. Few seem to realize that a violation of the game laws can carry with it a double-barreled penalty, one the actual fine for the offense, the other a revocation for a period of time which depends upon the nature of the violation.

One of the most interesting modern cases dealing with illegal killing of game arose in Clearfield County, *Commonwealth v. Hayes*, 3 D. & C. 473, 1923. It was established that A and B shot at a deer, that C as arbitrator awarded it to B, A thereupon shot another, and the question arose whether he had shot two deer when the limit was one. Said the Court:

"... a hunter who takes part in the shooting of a deer under such a state of facts that he claims the deer, which is awarded by some person agreed upon to another, whereupon he proceeds to kill another deer, is acting at his Peril, as he is not protected by the award of the first deer to another, nor is there any existing custom recognized by the law that the person in possession of the deer at the time of its death is the one who killed it. In every case the question is one of fact, to be decided on the facts in the individual case, and it is to be incidentally noted that the policy of the law on the subject is to restrict killings. Precisely what might be the result and how many persons would be held to have killed a deer where the animal ran in front of some bullet in a general fusilade remains yet to be determined . . ."

The moral is, to be sure, take your lawyer with you when you go hunting. Poor devil, he needs the recreation too.



The Pennsylvania Deer Story 1958

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Brief History of the Range, Herd and Factors Influencing Management

INDIANS never had it as good, as far as deer hunting is concerned, as Pennsylvania sportsmen of the last several decades. Contrary to popular belief, Pennsylvania's forests prior to colonization did not support the numbers of deer known to recent hunters. As the settlers hewed their farms out of the vast woodland and cut timber for their use, conditions were locally improved for deer. But there was no control of deer killing and no legal protection for them, and during the succeeding years deer were nearly wiped out.

Then things began to happen which resulted in a tremendous increase in deer numbers. Protection was given deer in the form of hunting regulations. The vast forested areas of the State had recently been timbered-off in massive lumbering operations, the like of which will not be seen again in Pennsylvania. Rapid growth of shrubs and seedlings following lumbering provided an abundance of nutritious food for deer. A relatively few deer, less than 1200, (which certainly did not play an important role in the build-up of the herd) were stocked. About half of these deer came from private deer parks in Pennsylvania while the remainder came from other States.

Large deer, nice racks and lots of fawns were produced under these ideal food conditions. This factor, coupled with protection, was responsible for sky-rocketing deer numbers. Of course the food producing plants could not keep pace with the increasing herd and in less than 25 years the tables had been completely turned. While just after the turn of the Century the problem was too

few deer, by 1925 there were too many in some areas.

Extensive simultaneous lumbering operations which earlier had resulted in an abundance of nutritious food for a period immediately following cutting, now also reversed the former benefits. Because the bulk of the forests had been cut in a few years the result was an even-aged stand of forest trees. Once these areas outgrew the shrub-sprout stage, they offered little food to deer compared to the period of plenty just past. This situation was further complicated by the large numbers of deer which over-utilized the remaining browse producing plants and eliminated many of them from the scene.

Such conditions over wide areas of forested land and trees of insufficient size for harvest, made it difficult to provide browse economically, effectively or efficiently. Cuttings expressly for browse were made, areas of smaller trees were "run down" with bulldozers, and forest cuttings for timber products were accomplished. These were only minor operations as compared to the almost simultaneous State-wide lumbering of the earlier years. Sprouts and new growth were consumed on these comparatively small areas, and their productivity destroyed. Reproduction of forest trees, except beech, has been curtailed by deer in some areas of the State. Under the present pattern of forest ownership and management, it is practically impossible to cut a large enough area at one time to eliminate excessive damage by deer to forest reproduction. Since deer are dependent upon forests for survival, it behooves us to manage deer num-

bers so that the forests' production of deer food can be maintained along with a reasonable deer herd.

Early attempts by the Game Commission to control deer numbers through harvests of antlerless deer met with strong opposition. There is little doubt that had more deer been harvested in earlier years, our forests would be more productive of deer food today, and also would provide better living conditions for small game species such as snowshoe hares, cottontails and grouse. These are now largely absent from many of the forested areas due to the impact of deer on low ground cover so vital to these species. We could have maintained a large deer herd in better condition—heavier animals with better racks and an increased rate of reproduction if closely regulated harvests of antlerless deer had been accepted by sportsmen. Persistent and

devoted Commissioners, recognizing their responsibilities to wisely manage the wildlife resources, continued to seek a workable method of regulated antlerless harvests. But it was not until 1951 that the allocation of antlerless licenses on a County basis became a reality.

The antlerless deer license allocation on a County basis is a management tool of utmost importance. Antlerless deer harvests were too high in some counties and there were under-harvests in other counties prior to the provision of this tool. It is imperative that all Pennsylvania sportsmen recognize this system as an important and invaluable tool in deer management. Through its use, hunting pressure can be regulated and directed to obtain desired harvests of deer and to insure continued good deer hunting.

WHAT HAS HAPPENED TO OUR DEER?

As a result of carrying more deer than the range could adequately support over a period of years, our deer as well as the range have deteriorated. There has been a reduction in body size and antler growth in the overbrowsed areas. Take a look at some of the photos of deer killed in earlier years and compare them with recent kills in food problem areas. Or compare the size of deer from regions of contrasting food conditions. We have weighed fawns which tipped the scales at 80 to 93 pounds (hog-dressed) in good food areas, but in "eaten out" areas a fawn seldom reached 60 pounds. Similar contrast-

ing weights were common to adult deer found in poor as contrasted to better food areas. There is some evidence that even though food may be plentiful, when large numbers of deer are allowed to build up, there is a reduction in body size. Apparently this occurs as a result of stress between the members of the high population.

Many hunters have remarked about the poor quality of antler development in recent years. The quality of antler growth—size and points—is directly related to quality and quantity of food. Indirectly there is an association between age and antler

growth. The first antlers—other than the “buttons” of fawns—are produced by $1\frac{1}{2}$ year old deer, and size usually increases with the age of the deer. A deer reaches prime age at about four years. There may be some decline in antler growth after a deer reaches 8 years or more but this is no real problem in Pennsylvania as few male deer live to that age.

Yearling deer on good range should produce their first antlers with 8 or more points. On mediocre range, unbranched antlers or spikes are common on yearlings and we have checked bucks as old as $5\frac{1}{2}$ years which had only spikes. The sad plight of deer in some parts of Pennsylvania during recent years was further demonstrated when examinations revealed $1\frac{1}{2}$ year old “button bucks.” These deer had failed to grow antlers above the hair line as yearlings—not fawns!

Some deer have starved to death in Pennsylvania. During the peak populations of earlier years this winter mortality was sometimes heavy. Many of these deer would not have died had additional harvests been acceptable. In recent years deaths from starvation were not as high because we have enjoyed exceptional winter breaks in the weather until last winter. An unusually severe winter in the last decade would have resulted in a heavy winter kill—luckily this was not experienced.

Perhaps more important than the actual winter kill of deer due to mal-

nutrition has been the less dramatic, subtle, year-round starvation of deer. Actually many of our deer have been on “starvation” rations from prenatal stages and birth. Food has been scarce during summer as well as winter in much of the big woods country. Good mast crops of acorns, etc., in some years have provided brief periods of plenty but at best this is only temporary improvement. Unfortunately, hunters are misled by these temporary periods of plenty. The observation of acorns or other mast and the fact that deer may have considerable fat accumulated during the hunting season prompts many hunters to believe that no food problem exists. These sportsmen must realize that this food is available for a limited part of the year and that food is extremely scarce at other seasons.

In some of the big-woods counties, deer feeding habits have changed—by necessity of course. The lack of natural browse and other food has caused the deer to take-up “rooting.” As “rooters,” the deer paw and dig out underground stems, roots and other plant material in order to survive. Even this food source is eliminated, however, when the ground is frozen or when covered with deep snow.

As natural food supplies dwindled in woodland areas, the deer used farms more for feeding. Crop damage complaints were, and continue to be common. Many farmers have legitimate complaints as herds of 40 or more deer ravaged their crop fields. The pattern of farming has been changed in some areas in order that the farmers could live with deer.

Contrary to the beliefs of some, there have been no mass or extended movements by deer into agricultural counties. Local movements from wooded areas to agricultural lands are common but the real reason deer have increased rapidly in farming areas outside the big woods counties

is the abundance of nutritious food and the resulting high productivity of the herd. In the better food areas adult does produce more fawns and about one-third of the female fawns bear young when they are just a year old. On the poor range, fawns seldom produce young.

Increased numbers of deer in the agricultural and more urban counties have become a serious menace to highway traffic. The number of deer

killed by vehicles has also continued high in some of the big-woods counties. This was due in part to the poor food conditions in the woods and the deer feeding in fields close to highways. During 1957 there were 9,262 deer known to have been killed by vehicles. During the first six months of 1958 this figure reached 3,280, and has averaged 634 per month during March through June.

WHAT ARE WE DOING FOR DEER?

From the time that the first deer food problem confronted the Commission, steps have been taken to provide additional forage. Many forested acres have been treated in some manner or other to provide browse. Some of these operations have been specific browse cutting jobs, others have been timber harvests or thinnings, release cuttings, forest road daylighting jobs and allied ventures. In addition to these operations to provide browse, many acres of forest lands were cleared and planted to grasses and legumes for deer forage. Old field areas were also devoted to these plots and long stretches of rights-of-way and woodland roads were also seeded.

During the 1956-57 fiscal year, timber harvests for sawlogs were in progress on nearly 4,500 acres of State Game Lands, and in the following year on 3,150 acres. Other cuttings yielding lesser products (pulp, posts, etc.), benefited wildlife on about 37,000 acres during these years. Forest cuttings for the specific purpose of benefits to game embraced more than 1,250 acres in the

earlier year and about 1,000 acres last year. Due to the nature of the Commission's holdings and the present stage and character of tree growth on these areas, massive cutting operations are not practical or possible. Unfortunately, due to the limited size of today's timber operations both on State and private lands, the new growth has not been able to stand the deer pressure. Hence to help the deer to any substantial degree, some reduction in pressure on the browse is necessary. Since the money derived from the sale of antlerless deer licenses was earmarked by law, . . . "to be used solely for cutting or otherwise removing overshadowing tree growth, to produce underbrush sprouts and saplings for deer food and cover on game land," . . . every effort should be made to see that these cutover areas are not immediately over-utilized and their future value destroyed. A continuous supply of browse is required to maintain the deer herd and we cannot sacrifice the herd's future for temporary alleviation of food shortages.

WHERE DO WE GO FROM HERE?

From the remarks in the previous section it should be obvious that things will have to get worse before they can get better. Confusing? Things will get worse as far as some deer hunters are concerned because in order to grow deer food to support deer, lower numbers of deer will have to be carried in many areas. Recovery of these areas will hinge on this and their future ability to carry deer will depend on it. Recovery will not be as rapid as some would like because in some cases the sources of new growth for food have been eliminated and/or there is undesirable (non-deer food) growth present which will severely compete with the more desirable species. There is no one, rapid solution to this problem. A long range plan embracing all of the factors must be considered.

Hunter success will decline, not only because of less deer in some areas but also because the number of hunters is increasing. Every effort will be made to maintain the size of herd which will permit reasonable annual harvests and hunter success.

Some people think that when deer become as plentiful as they have been recently in Pennsylvania, the sport is cheapened. It is common knowledge that no great amount of skill, or knowledge of deer was required to bag one in late years. In the wake of abundant deer, road hunters, meat hogs, and poachers flourish. When deer are harder to come by, this type of hunter is not so prone to be active and deer hunting again becomes sport. The real hunter who knows

something about his quarry and who will expend some effort and get more than a couple hundred yards from the road, will usually get his deer.

Sometimes he, too, may not be successful, but he should enjoy the hunt!

If the forests are allowed to recover and deer again have more to eat, body size and antler development will improve. Under these conditions it would be possible to harvest more deer from a smaller breeding population. Thus we would harvest the annual crop from a more productive herd. To achieve this goal calls for a better understanding of the many problems associated with deer management, the most important of which is food.

How Much Do Deer Weigh?

Average hog-dressed weights for deer examined during the 1957 seasons were:

<i>Age</i>	<i>Male</i>	<i>Female</i>
Fawn	51 lbs.	51 lbs.
1½	100 lbs.	87 lbs.
2½	112 lbs.	91 lbs.
3½	131 lbs.	100 lbs.

WHAT IS A MICHIGAN BUCK?

A male deer that lives in that State! Michigan deer are no different from Pennsylvania deer. Only a few deer of the 1200 deer released were bought in Michigan. Any well fed deer which grows large antlers is

usually called a Michigan buck by older hunters. There is really no such deer as a Michigan buck, as any well fed buck will grow large, massive antlers.

WHY DON'T WE HAVE AN ANY DEER SEASON FOR FIREARM HUNTERS?

We have so many hunters and much of our forest is now so open that the deer wouldn't stand a chance. It would really not be deer hunting but a brief period of slaughter. We could kill as many deer as we could afford to harvest in a day or less. Under these conditions the deer herd would not provide the recreation or satisfaction to the most people. It would not be wise use of

a valuable resource. Too many deer would be killed in some areas and not enough in other places. Remember, too, that many Pennsylvania deer hunters plan several days or a week's vacation to enjoy their sport. A one or two day season would deprive not only them but many businessmen, grocers, owners of hunting lodges, etc., of the real benefits of our traditional deer season.

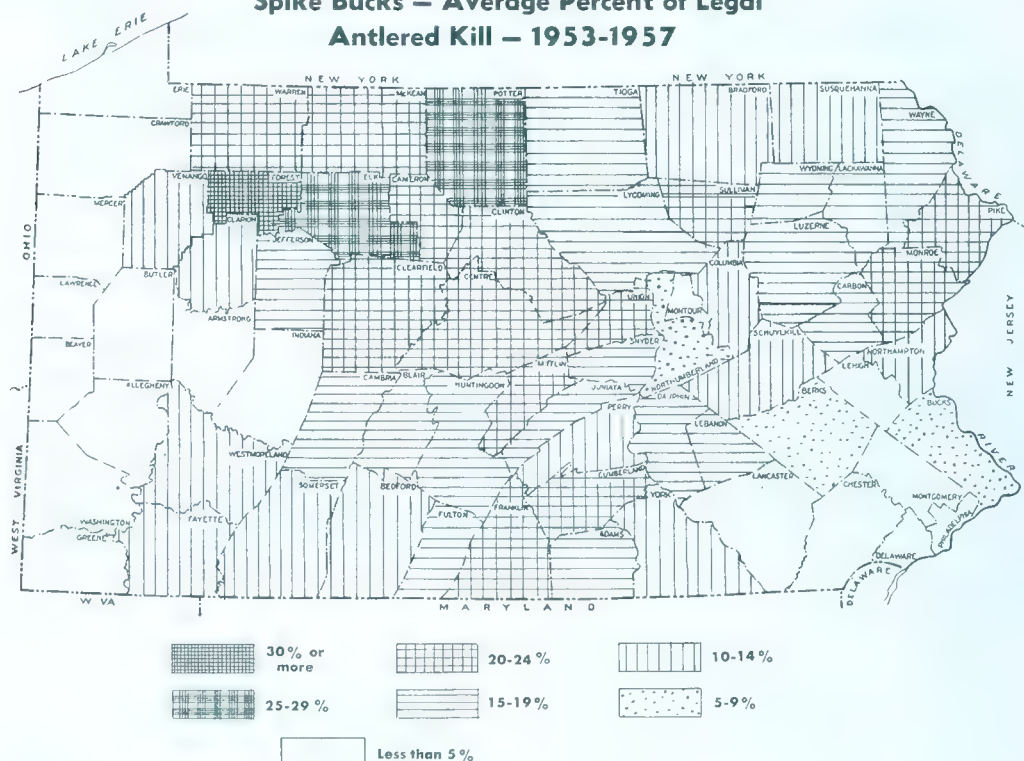
WHY DO WE SHOOT SPIKE BUCKS?

In the years prior to the time when spike bucks first became legal game in Pennsylvania many of these deer were killed illegally. In some States where spikes are not legal, as many illegal deer are killed as legal deer taken. This is a waste of a valuable resource. Spike bucks should not be given any advantage over bucks with branched antlers. Actually the branched antlered bucks are more desirable as breeders. Deer with spikes are uncommon in the better

food areas, hence we might consider a spike as an inferior type animal, and we are doing deer and nature a favor in harvesting them. The ratios of spikes in the reported kill for the last 5 years were:

Year	% of Total Reported Kill
1953	16
1954	18
1955	15
1956	22.5
1957	19

Spike Bucks — Average Percent of Legal Antlered Kill — 1953-1957



WHY AREN'T MORE TROPHY DEER KILLED?

Because we have so many hunters that few male deer reach the age for growing real trophy antlers. But perhaps a more important reason is that deer over most of our real deer range do not get enough to eat to grow

How Many Deer Are There In Pennsylvania?

By the time the 1958 hunting season arrives there will be nearly 500,000 deer in Pennsylvania. Conservative figuring would indicate that the composition of the estimated herd would be:

Female Fawns	68,000
Adult Females	205,000
Buck Fawns	85,000
Adult Bucks	104,500
	462,500

trophy antlers. It should also be remembered that we can grow 3 bucks to 1½ years of age on the same feed required to grow one 4½ year old trophy buck. With the number of hunters we have in Pennsylvania this is an important consideration. You just can't have lots of hunters, and a lot of trophy bucks. In the 1957 season only 3% of the antlered deer checked were 4½ years or older, other ages were represented as follows:

Age	% of Antlered Kill
1½	61
2½	25
3½	11
4½	2
Older	1
	100

HOW IS THE AGE OF A DEER DETERMINED?

By the replacement and wear of their teeth. A deer does not get its full set of permanent teeth until it is about 1½ years old. Up to this age the milk or baby teeth and the replacement of these by permanent teeth are used to determine age. Older deer are aged according to the

wear on the permanent teeth. While many hunters are interested in the age of the deer killed, this technique and information is a valuable tool in management. Age composition of the herd, life span, annual replenishment, etc., can be determined.

What Is the Usual Reason Advanced By Some Hunters for Fewer Deer and Poorer Quality Deer—and What is the Real Cause?

How Does Pennsylvania's Deer Problem Compare With Other States?

Pennsylvania's problem is not unique. Many other States have similar problems. In some of the States the problem is newer and they are benefiting from our experience. The most important problem everywhere is deer food. However, in some States some areas can seldom be opened to deer hunting due to weather or legislation. In some States the problem is not enough hunters to harvest the deer. The real problem which precedes the food problem, is obtaining public acceptance of adequate harvests. If enough deer are harvested the food problem would never appear.

How Do Antlerless Harvests Benefit Hunters?

Hunters benefit in many ways from harvests of both sexes of deer. States

Some hunters blame the "doe" seasons for diminishing deer numbers in some areas. The real cause is the lack of adequate deer food. To grow any crop—and deer are a crop of the land—food must be available. A farmer cannot grow 100 cattle if he has feed for only 10.

which killed 25 or 30 thousand bucks per year have had sustained harvests of 60-90,000 of both sexes and a State which killed 50,000 bucks a year has enjoyed annual harvests of over 100,000 of both sexes. Hence more hunters can be successful. The range will be maintained in better condition. This will provide better living conditions for other game, as well as deer.

Why Is It Advantageous To Harvest Most Of the Annual Increase Or Crop?

Studies have shown that deer are healthier and raise more young on ranges where most of the annual crop is harvested. This occurs because the overwintering deer have more to eat. This also reduces overbrowsing and damage to the range which would limit future crops.

When Does the Peak of the Rut and Fawning Occur in Pennsylvania?

These vary from year to year.

<i>Year</i>	<i>Rut Peak</i>	<i>Fawning Peak</i>
1957	Nov. 14-20	May 29-June 4
1956	Nov. 19-25	June 1-7
1955	Nov. 20-26	June 7-13

HOW MUCH FOOD DO DEER REQUIRE?

It is generally agreed that 6 to 8 pounds of food per day is required to adequately nourish the average deer. There is considerable seasonal variation in food intake. During the rut and winter months intake is reduced. It appears that undernutrition may be a natural winter phenomenon. Then in spring and summer 10 or more pounds of food may be consumed daily. Simple arithmetic will quickly indicate how much food is required to maintain 350,000 deer over one winter. If each deer con-

sumed 3.5 pounds of food daily, then each day more than 600 tons of food is necessary and from the close of the deer season to the new growth period of spring, more than 80,000 tons of food is required. It becomes obvious why food problems exist from an even quick look at these figures. The food problem would really be driven home if you went into the forest and timed the period and computed the area required to provide and clip $3\frac{1}{2}$ pounds of browse, in the manner it is taken by deer.

WHAT DO DEER EAT?

Deer normally have certain preferred foods but in the absence of these will eat a variety of items. A hungry deer will eat items of little nutritional value—mere stuffing not really food. Deer are primarily browsers but also graze considerably. Mast—acorns, beechnuts, etc., are used when available. Browse is extremely important in maintaining a sizeable

healthy herd. Maple, birch, ash, oak, aspen, hickory, apple, cherry, and sassafras are trees which offer preferred browse. Many shrubs provide browse such as—dogwoods, hazelnut, sumac, blackberry, raspberry, elderberry, viburnums, hawthorns, witch hazel, and honeysuckles; unfortunately many of these no longer exist in quantity in the problem areas.

HOW ABOUT ARTIFICIAL FEEDING OF DEER?

Any artificial feeding of deer serves only to aggravate the future situation. Many times deer will die with full stomachs after radical changes of diet. Artificial feeding of deer sets up a sort of "dog chasing tail" situation, if we do not harvest enough deer

then we run into food problems, then we use artificial feeding to keep some alive, these again to be under-harvested, and add further to our problems. Under these conditions things get progressively worse instead of better.

What Is Starvation Or Stuffing Browse?

Laurel, rhododendron, pine, spruce, hemlock.

Does The Largest Overwinter Herd Provide The Best Hunting?

Not necessarily. The most productive herd (which is usually not the largest herd possible) will provide the best hunting. Fifty (50) well fed does will produce as many or more fawns than 100 ill-fed breeders.

Is Inbreeding Responsible For Runty Deer?

NO! Runty deer result from undernourishment, not from inbreeding. The effects of inbreeding among a pure wild population are not even noticeable. Small size, poor rack development, etc. reflects poor food conditions—not inbreeding.

What Will Increase The Size Of Deer?

Adequate food will increase the size of deer. Large deer have grown big because of plenty of food. But put the offspring on poor rations and a stunted animal will result. The continued poor food conditions have

created smaller deer. As food conditions improve, deer size will also improve.

How Are Food Conditions Reflected In Antler Growth And Shedding?

It takes good food to grow good antlers. The better fed deer will carry their antlers longer than the poorly fed. Some ill fed bucks lose their antlers early in the winter (during deer season) but it is not uncommon to see antlered bucks during late March and April in the better food areas.

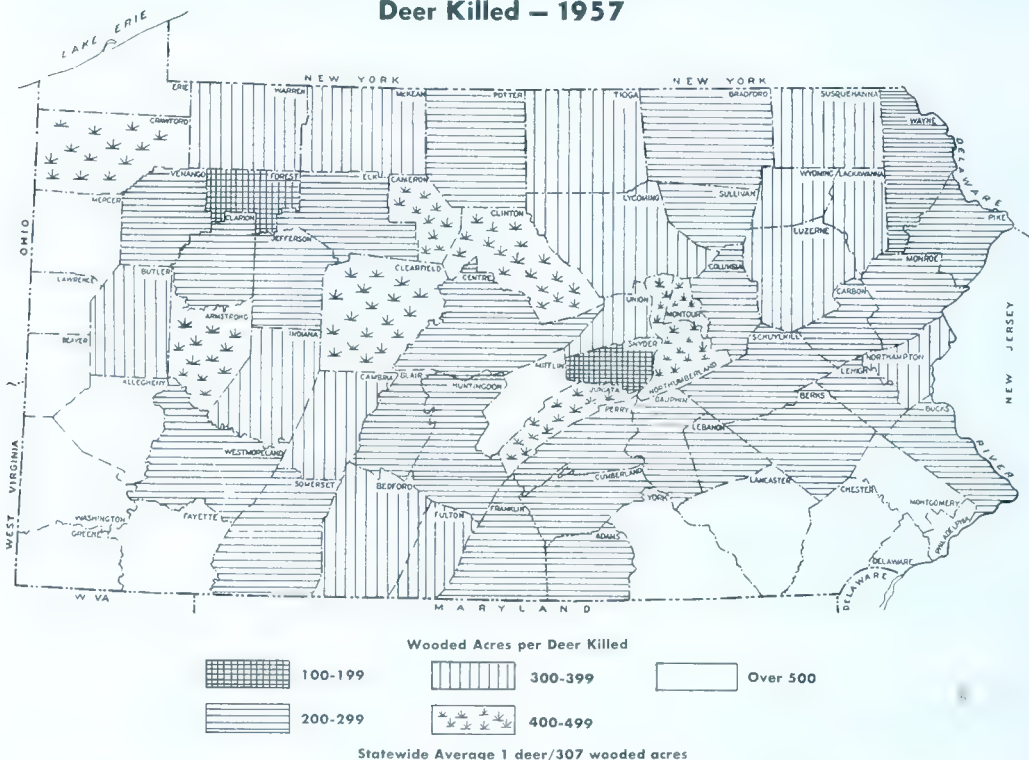
Are Crop Damage Complaints Really True?

Very true in almost all cases. Many factors influence the amount of damage. In some areas farmers have had to change their crops and farming pattern in order to live with the deer.

Why Don't These Farmers Use Repellents?

These materials are quite expensive and not practical on many crops. To an extremely hungry deer (and we have had many in this category), there is no such thing as a repellent.

Wooded Acres Per Legal Antlered Deer Killed - 1957



WHAT INFLUENCE HAVE DEER HAD ON THE FORESTS?

The impact of deer (numbers in excess of what the range could adequately support) on our forests has been tremendous in some areas. While the usual run of hunters and sportsmen do not recognize this, it is a fact. The Forest composition has been changed—by deer. In some areas there are merely scattered trees

and open parklike grass and fern areas—not really forests! In addition to these changes, the influence on other game has been substantial. Food and cover producing shrubs have been eliminated and with them went the hares, cottontails and grouse.

The best efforts of man to fit the range to the herd have been unsuccessful. Fitting the herd to the range offers the only hope of solution to the aged problem of deer management.

Tomorrow's deer herd will depend upon the food supply. Thus we must manage today's herd to assure the future food supply.

The deer herd is a natural resource of great importance. Our problem is to use this resource wisely, to avoid waste and to protect and perpetuate the land (environment) of which it is a product.

What Is The Basis Of The Seasons?

Deer regulations are based on the condition of the herd, the condition of the range, and the number to be harvested.

Why Do We Have Antlerless Permits?

Because different numbers of deer need to be harvested in different areas. This is the most important tool we have in regulating the harvest of antlerless deer. Without it too many deer would be killed in some areas and not enough in others. The day may come when permits will be required for the buck harvest. Many states already control harvests by setting up various hunting areas and allocating licenses according to the needs of the areas. Where there is a large demand for available licenses, drawings are held to determine who will hunt.

Isn't It A Shame To Shoot Fawns During Antlerless Deer Seasons?

No. Fawns suffer the most during periods of winter food shortages. When there is competition for food, the older, bigger deer will drive fawns away from the food in order to have it for themselves. This is an important consideration in winter feeding, as adult deer will persistently subdue the younger deer and not allow them to feed. Fawns are the first to die when winter kill strikes, hence it is good sense to make use of these deer rather than waste them.

How Many Male Deer Are Killed During Antlerless Seasons?

About 1 deer in 5 is a buck—some are adult bucks which have shed antlers.

Average Number Of Antler Points
By Age Class-1957

Age	Points
1 1/2	3.9
2 1/2	5.75
3 1/2	7.1
4 1/2	7.1
Older	8.6

Age Composition Of Adult Doe Deer
-1957 Antlerless Kill

Age	% of Total
1 1/2	26
2 1/2	27
3 1/2	22
4 1/2	11
5 1/2	6
Older	8

Percent Of Male Deer In Antlerless
Kill

1951	19.8
1952	19.8
1953	19.6
1955	20.5
1957	19.6

Reported Out Of Season Mortality-
1957

(Other than Starvation)	
Crop Damage	2,281
Dogs	389
Vehicles	9,262
Miscellaneous	3,281
	15,213*

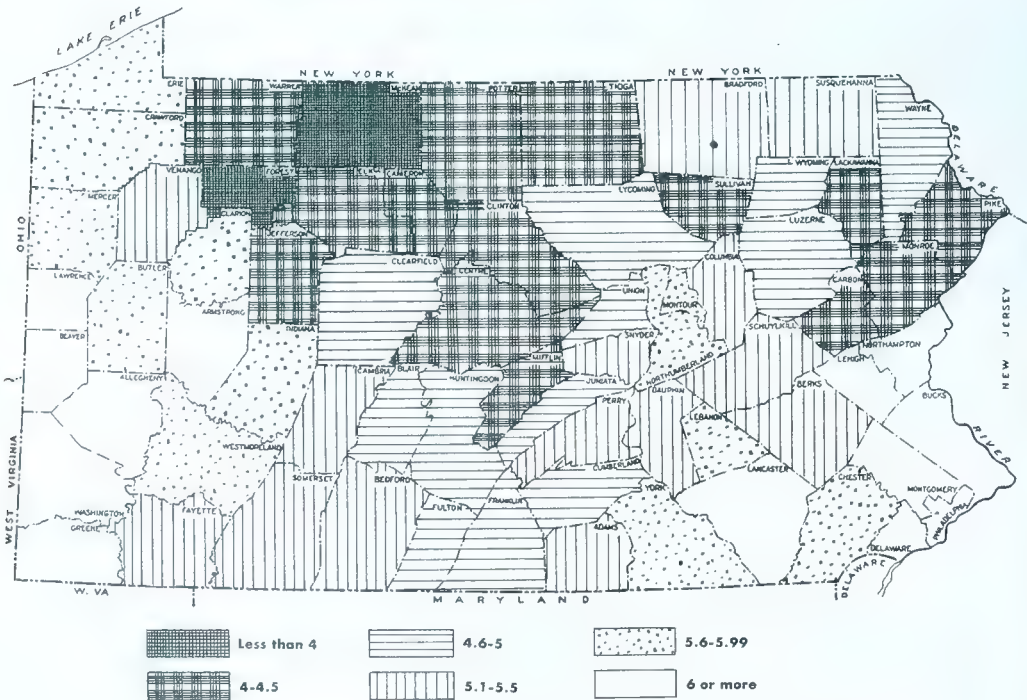
*5,400 were male deer.

Reported Out Of Season Mortality
January 1-July 31, 1958
(Exclusive of Starvation)

Crop Damage	617
Vehicles	3,697
Miscellaneous	1,538
	5,852

Mortality is normally highest during late summer, fall and early winter.

1957 - Average Antler Points



GAME COMMISSION DECLARES SPECIAL OPEN SEASON TO HUNT ANTLERLESS DEER

DECEMBER 15, 16 and 17, 1958

The Pennsylvania Game Commission, by resolution adopted at its meeting on July 1, 1958, and pursuant to authority conferred upon it by law, declared an open season for the hunting, taking and killing of antlerless deer (deer without visible antlers or horns), regardless of sex, size, age, or camp limit, on December 15, 16 and 17, 1958, throughout the entire Commonwealth, except in Game Refuges or Propagation Areas (other than on any of the latter which the Commission may later specifically declare open to deer hunting) established by the Commission, during which time antlerless deer may be hunted for and taken only in the manner prescribed by the provisions of the Game Law and resolution and regulations of the Commission.

The quota of Antlerless Deer Licenses for each County, as made available by action of the Commission, is as follows:

NUMBER OF LICENSES ALLOCATED FOR ISSUANCE BY EACH INDIVIDUAL COUNTY TREASURER

County	County Seat	No. of Licenses	County	County Seat	No. of Licenses
Adams	Gettysburg	2,200	Lackawanna	Scranton	3,750
Allegheny	Pittsburgh	1,250	Lancaster	Lancaster	2,000
Armstrong	Kittanning	3,250	Lawrence	New Castle	2,000
Beaver	Beaver	1,250	Lebanon	Lebanon	3,000
Bedford	Bedford	6,300	Lehigh	Allentown	2,000
Berks	Reading	6,000	Luzerne	Wilkes-Barre	7,500
Blair	Hollidaysburg	3,400	Lycoming	Williamsport	8,000
Bradford	Towanda	7,000	McKean	Smethport	16,500
Bucks	Doylestown	3,250	Mercer	Mercer	3,000
Butler	Butler	5,000	Mifflin	Lewistown	3,200
Cambria	Ebensburg	5,000	Monroe	Stroudsburg	6,500
Cameron	Emporium	3,500	Montgomery	Norristown	2,500
Carbon	Jim Thorpe	7,000	Montour	Danville	1,250
Centre	Bellefonte	7,500	Northampton	Easton	2,500
Chester	West Chester	3,000	Northumberland	Sunbury	3,000
Clarion	Clarion	4,000	Perry	New Bloomfield	5,000
Clearfield	Clearfield	6,000	Philadelphia	Philadelphia	.....
Clinton	Lock Haven	4,250	Pike	Milford	8,000
Columbia	Bloomsburg	5,000	Potter	Coudersport	11,000
Crawford	Meadville	6,500	Schuylkill	Pottsville	11,000
Cumberland	Carlisle	3,200	Snyder	Middleburg	3,000
Dauphin	Harrisburg	4,000	Somerset	Somerset	8,750
Delaware	Media	500	Sullivan	Laporte	7,000
Elk	Ridgway	15,000	Susquehanna	Montrose	8,250
Erie	Erie	5,000	Tioga	Wellsboro	7,500
Fayette	Uniontown	3,000	Union	Lewisburg	2,750
Forest	Tionesta	15,000	Venango	Franklin	6,000
Franklin	Chambersburg	4,400	Warren	Warren	15,000
Fulton	McConnellsburg	3,750	Washington	Washington	1,250
Greene	Waynesburg	1,500	Wayne	Honesdale	8,500
Huntingdon	Huntingdon	6,000	Westmoreland	Greensburg	7,500
Indiana	Indiana	5,250	Wyoming	Tunkhannock	5,000
Jefferson	Brookville	5,500	York	York	3,000
Juniata	Mifflintown	2,750			
TOTAL					350,700

IMPORTANT—DO NOT MAIL APPLICATION TO PENNSYLVANIA GAME COMMISSION OR DEPARTMENT OF REVENUE, HARRISBURG. Antlerless deer licenses will be available at County Treasurers' offices only.

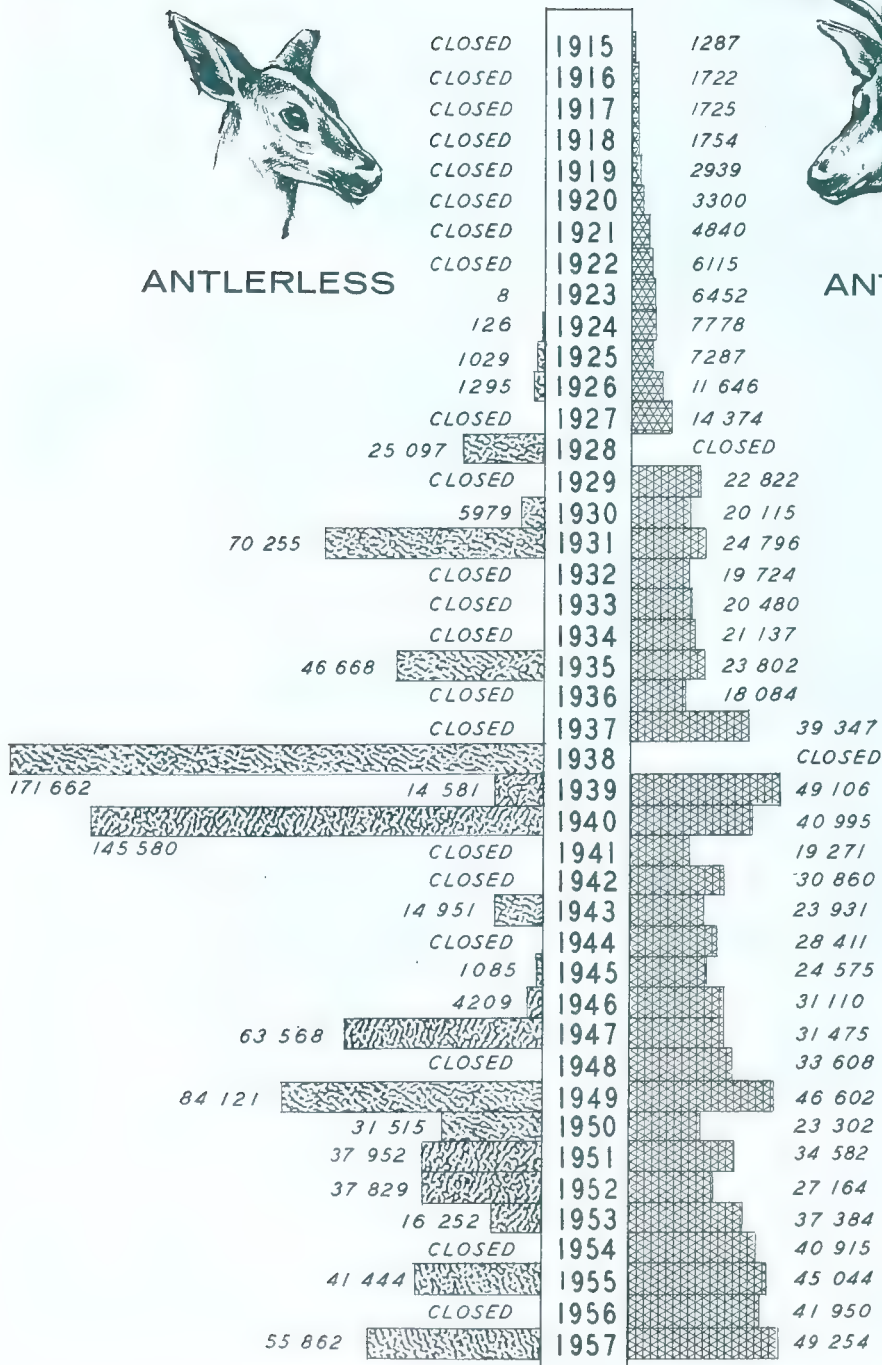
Pennsylvania Deer Harvest 1915-1957

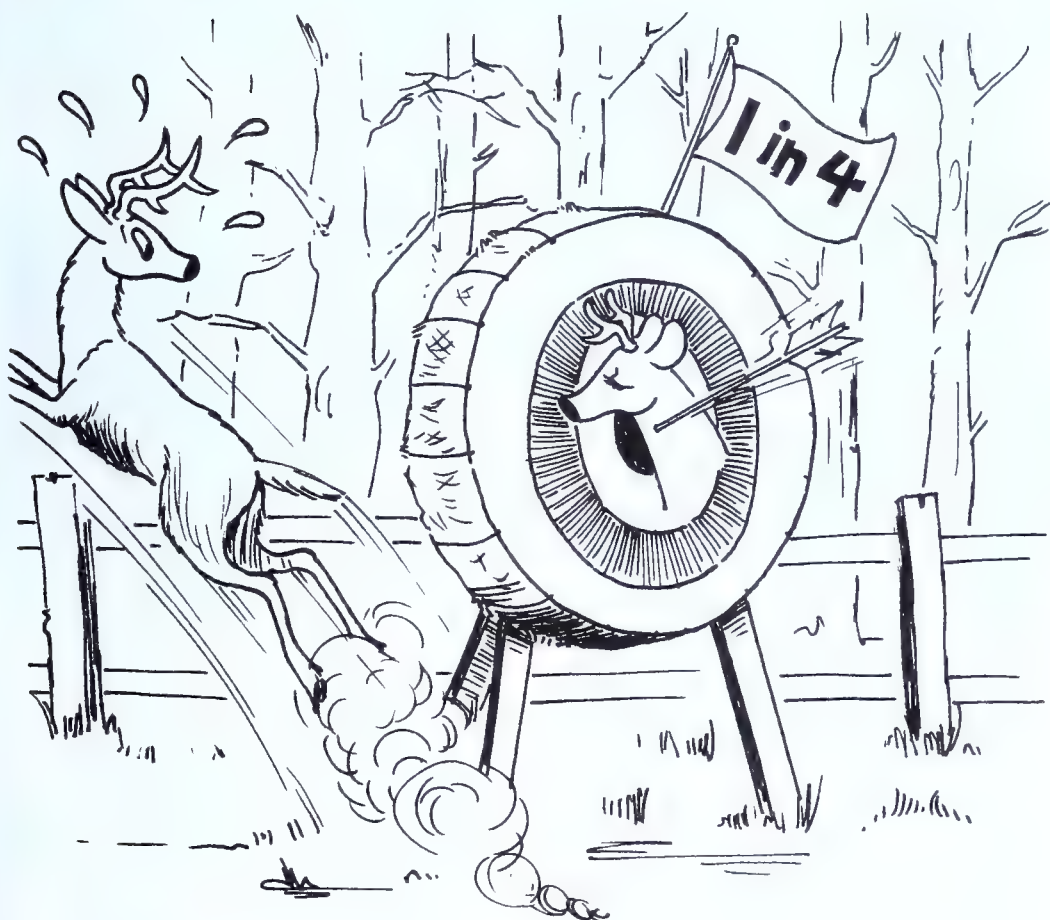


ANTLERLESS



ANTLERED





The Fox Harbor Archers

By Robert G. Miller

(Photos By The Author)

A FEW weeks after the '57 deer season eight bowmen of the Fox Harbor Archers, of Columbia, were each presented with a gold statuette of a deer in recognition of their success in accomplishing a kill.

These were eight successful hunters out of 33, a ratio of almost one to four and an excellent showing when compared to the state-wide ratio of only one in 42.

This accuracy with a bow, statistics show, prove that practice on a variety of targets such as provided on the Fox Harbor range, one of the finest

in Lancaster County, leads to far greater success in actual hunting than does practice on "backyard" or lawn targets.

Presented at the club's annual banquet, when the group was cited by a representative of the Pennsylvania Game Commission, the trophies represent to their individual owners hours and hours of constant practice in all kinds of weather and under conditions similar to what they expected to find in deer country.

As an example, interspersed with a few safety hints, let's examine the



PRACTICE BUTTS are good starting points for both novice and veteran archers. Here they limber up and sharpen their aim before trying to better their score on the 28-target field course.

background of one of these successful archers from the time he picked up a bow until the day he felled his first deer.

Closely paralleling the experience of his fellow archers is that of Jim Dugan, Columbia, who became interested in archery in January, 1957, and less than 12 months later returned home with a five-point buck.

In fact, during the year, a bit of his interest rubbed off on his wife, Hilda, and their son, Jim, Jr., and now almost every weekend, plus summer evenings after work, the entire family heads for the range and shoots a round at every one of the 28 targets before calling it a day.

Hitting the target, especially on the 80 yard range, isn't always a simple matter. Occasionally the target is missed completely and it becomes necessary to scrounge around in the brush looking for that lost arrow. When this happens the Dugans put into practice a "must" where safety is concerned. The bow is placed across the target face, indicating to another archer that someone is in back of the target seeking a lost arrow.

The elder Dugan, before becoming interested in archery, hunted bear, deer and small game with rifle and shotgun. As each hunting season appeared he noticed a gradual lack



FAIR WEATHER OR FOUL finds the Dugan family practicing on the range. Dugan, who became interested in the sport in January, 1957, shot his first deer less than 12 months later. He bases his success on constant range practice.

of game, especially small game in the local area, and wondered what kind of a hunting future was in store for his son when he became old enough to handle firearms.

He took note of the ever increasing number of hunters and found the majority of them were taking everything but not giving anything to provide for the future. This, to him, was a rather bleak outlook.

Dugan had just about decided to give up hunting altogether when he realized that archery was just the sport for him. He felt that today's modern weapons left little chance for survival on the part of small or large game while archery evened up the odds and demanded more skill on the part of the hunter.

Dugan was one of the first to join the Fox Harbor Archers. Then the club had only a half dozen targets set up and after carefully selecting the proper equipment he went to work, from one target to the other, with the seriousness needed if one is to show any improvement at all in this sport.

All the while he kept in mind another safety factor which is of prime importance in the field. This involves knowing what you are shooting at. Too many hunters, regardless whether they are using a bow or rifle, have a habit of firing first at a movement in the brush and later finding out what they fired at. Nine times out of ten that movement could be caused by a fellow hunter.

Gradually the club set up 22 additional shooting areas, to make up a standard 28 target range, and Dugan continued to spend hours and hours on constant practice. It takes time to carefully shoot each target and sometimes his practice sessions, especially during the summer, would average up to 15 or 20 hours a week.

In addition he has in his backyard two targets set up but finds in this kind of shooting, regardless where the targets are moved, the shooting is always from the same position and



GOLD STATUETTE for successfully bagging a deer during the 1957 season was awarded to eight of 33 members of the Fox Harbor club.

elevation. Here too, there is always the possibility the arrow will wind up in the neighbors wash hanging out on a line to dry, or else whiz through someone's bathroom window at some untimely moment.

On the other hand the archer using the range isn't generally faced with these results if he fails to hit the target. He also finds himself, from one target to the other, shooting from various elevations and distances which are the conditions needed if one plans to do any hunting.

Weather conditions never make any difference to the Dugans. Whenever they have the time available, they practice even if it means plodding through mud or several inches of snow.

Before launching an arrow that may have previously missed the target and struck a rock or glanced off a tree trunk, they check the shaft carefully for any cracks. As an arrow

is fired it bends slightly and a crack could result in a portion of the shaft imbedding itself in the archer's forearm or at least result in an extensive laceration.

The fall of the year is especially trying for the amateur archer who intends to hunt. Try working your way through a bed of dry leaves, without scaring every bit of game within a mile, and you'll know why stealth is one of the demands in deer hunting. This alone takes practice before it can be achieved.

Consequently that little statuette isn't just a lasting memento of having shot a deer. To Dugan it represents practice, practice and more practice, under all conditions, which finally led up to that day in Potter County when he spied his first buck, left it feed and work its way closer to his stand and then, before buck fever set in, launched the arrow that counted.

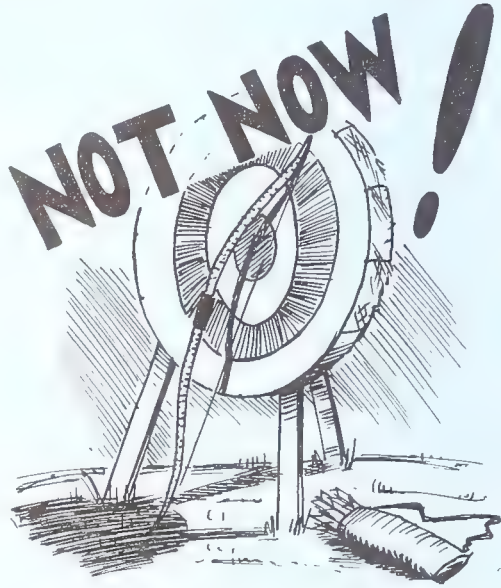
One important factor, which must always be considered especially by youngsters, is never to shoot an arrow straight up in the air.

Although Longfellow wrote, "I shot an arrow into the air. It fell to earth, I knew not where"; chances are you won't know either where it fell until it imbeds itself in your skull.

The Fox Harbor range is a part of the Columbia Fish & Game Assn. sportsfarm, located between Kinderhook and Ironville. Set up in accordance with the National and State Archers' Association requirements, it was the brain child of two cousins, Henry and Harry Barch, of Columbia.

They had been interested in archery, knew it was growing by leaps and bounds as a popular outdoor, and indoor, recreation, but they had no suitable area in which it could be pursued safely. Consequently when the sportsfarm was developed, they were given permission to develop 20 acres into an archery range.

The club started with six members



and today has a membership of 129 archers from Lancaster, York and Lebanon Counties. Members of other clubs are also given permission to use it when no tournaments are underway.

To share the responsibility of maintenance, a terrific chore from year to year, groups of archers, in some cases entire families, are given the responsibility of caring for a particular target area.

They clean up any unnecessary debris, clear a shooting lane wide enough to launch an arrow safely, and provide the necessary manpower for lugging in heavy bales of straw on which the targets are placed. Roofs are built over the target to prevent weather damage.

Shooting positions are indicated by stakes driven into the grounds, and there are 14 different ranges throughout the course, ranging from 35 feet to 80 yards. This makes things a bit tough for the archer who isn't consistently shooting from a set range.

Varying the range provides the necessary practice in judging distance, accounting for elevation, wind velocity and various other factors which must be taken into consideration before launching an arrow.

"Unfortunately," Hen indicated,

"too many people, parents especially, don't realize that an arrow in flight can be just as deadly as a bullet."

Parents give their youngsters an archery set, complete with steel tipped arrows, for Christmas and that same afternoon they can be found on some vacant lot or backyard shooting at anything and everything.

Consequently, when you have a dozen or more archers using the range at one time, safety must be stressed.

In fact, on the Fox Harbor range, before getting to the No. 1 position the archer is faced with a sign that reads:

"There is no such thing as a toy archery set. Any bow and every arrow is a dangerous weapon in un-

skilled or irresponsible hands. Think, Look, Be Sure before you release an arrow."

In addition to the previously mentioned safety hints, the club was careful in setting up the range that courses were not in line with one another so that an archer using one range is shooting at an angle away from the next course.

All things taken into consideration, archery is not something to be taken lightly but is a sport which must be taken seriously if ability is to be developed. Success is achieved only after constant practice, not practicing one day or week and then putting the bow away for a month or so and then expecting to start all over again from where you left off.

SAFETY REMINDER is prominently posted on the Fox Harbor field course. Henry and Harry Barch, of Columbia, the cousins who initiated plans for the range, check the sign urging every archer to "think, look and be sure" before they release an arrow.





FIELD NOTES



Elephant Birds?

LANCASTER COUNTY—A farmer named Mann in Manor Township, Lancaster County, informed the writer last July that he noticed blackbirds feasting on insects on the back of a groundhog which was sunning itself outside his hole. According to Mr. Mann, the groundhog appeared to enjoy this "dry shampoo."—District Game Protector J. M. Haverstick, Lancaster.

Did You Ever See A Drain Pipe Walking?

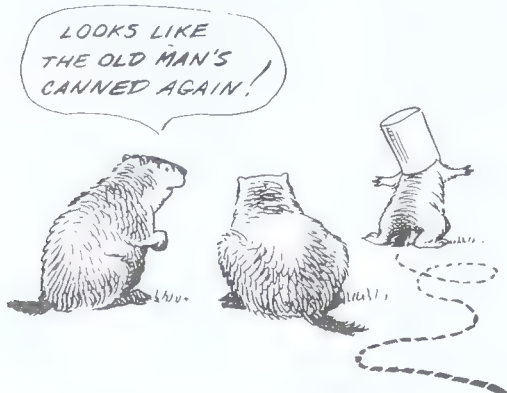
HUNTINGDON COUNTY—Early in July I received a report from a Mr. Moyer, Hesston, R.D. that he had observed what appeared to be a piece of drain tile taking a walk. Closer examination by the man disclosed a woodchuck with a rusty two quart fruit juice can lodged over its head. Having nothing handy to cut the can, Mr. Moyer eventually dislodged the chuck by vigorous shaking. Upon release, Mr. Chuck appeared rather ungrateful and made several fake attacks at his rescuer before ambling away with his ill temper.—District Game Protector Richard D. Furry, Huntingdon.

Watch Out For Woodchucks

MERCER COUNTY—Everyone has heard of various animals shooting humans with firearms, through carelessness of humans with firearms. On July 22, I investigated an unusual accident—one in which a woodchuck shot Glen L. Shawgo, Grove City, Pa., with a broadhead arrow. Glen is an ardent archer and he shot this 'chuck with a bow and arrow. The arrow pierced the entire body of the animal and the broadhead of the arrow extended about 18 inches through the 'chuck. Glen, surmising that the animal was dead, decided to pull his arrow out broadhead first. Just as he reached for the arrow, however, the 'chuck gave its last death lunge and thereby pushed the broadhead into the palm of Glen's right hand. The wound was 1½ inches long and 1 inch deep and required stitches to mend it. Mr. Shawgo would like to pass a word of warning on to anyone who shoots a wild animal of any kind. "Make sure it is dead before you attempt to do anything with it."—District Game Protector Arthur T. Biondi, Mercer.

Mark Of The Bear

JEFFERSON COUNTY—While walking through Game Lands No. 54 near the School a large Larch tree was found with several branches torn off and numerous deep gouges in the bark of the tree. Closer observation showed the damage to have been caused by a bear. It was apparently marking the tree as its territory or perhaps tearing the tree out of plain meanness. Teeth marks found five and one-half feet above the ground would seem to indicate a good sized bear.—Student Officer Joseph J. Matkiewicz, Ross Leffler School of Conservation.



Coons in the Corn

VENANGO COUNTY—A farmer contacted the Game Commission about some damage to his corn. He believed it was a coon working on the field. He was loaned some traps and shown how to set them. A few days later I checked to see if any raccoon had been caught. By this time the man had caught five raccoons and four woodchucks in his corn field. The traps were still being sprung by something. I checked back later and three more raccoon had been caught. It was no wonder the farmer was having a loss on his corn field. It seems to be under control now.—District Game Protector Clyde D. Decker, Franklin.

Out Of The Hay, Into The Frying Pan

YORK COUNTY—Recently I received a call from a lady in northern York County advising she had two ringneck pheasant eggs which she had removed from a nest destroyed by hay mower, and requested permission to artificially incubate the eggs, advising that she would release the pheasants if successful with the hatch. So incubate she did, in an electric frying pan, hatching both eggs which are now young pheasants doing fine.—District Game Protector D. H. Fackler, Windsor.



Cat On A Hot Tree Limb

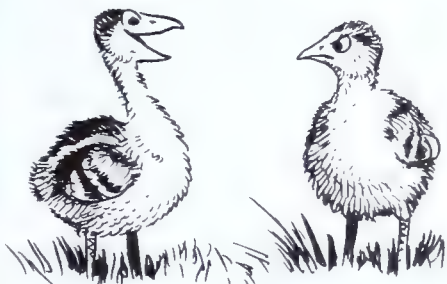
SULLIVAN COUNTY—On July the 24th, I received a call from Deputy Jason B. Little at which time, he stated, that a person had stopped and told him of a huge white and black house cat wedged or caught in the crotch of a red-maple tree approximately 5 feet from the ground and 100 feet inside a Game Land gate and along the Game Land road. He stated, that the cat was still alive and that he had tried to remove the animal, but could not because of the snarling teeth and claws.

Upon arriving at the scene we discovered everything exactly as the man reported. While I think we have all heard at one time or another of nature's cruel tricks on wild animals such as, deer caught in such a manner, beaver falling a tree on itself, etc. This is the first time, as least to my knowledge, of a domestic animal as stealthy, tricky, and agile as a housecat to fall victim to such an accident.—District Game Protector Paul W. Asper, Laporte.

Crowing About Cottontails

McKEAN COUNTY—Recently in talking to a friend of mine, he related the following story to me. While traveling down a road north of Williamsport, he noticed a crow in the road trying to get something.

MY MOTHER WAS A
SUNBEAM!



As he approached, the crow flew off and the animal it was trying to get went into the ditch. Wanting to see what the crow was after he decided to back up and try to locate the animal. As he started to walk back, two crows flew into the ditch and was after the animal. They did not leave until he was very close to them. Upon looking into the ditch he noticed they were after a young rabbit. It was very frightened but otherwise did not appear to be hurt.—District Game Protector Paul A. Ranck, Williamsport.

Baled Buck

BERKS COUNTY—As most farmers of Berks County know, the deer population has been on the increase for a number of years. It has now come to the point of baling them in order to create room for more.

Fred Kemmerer of near Moselem Springs, while baling straw noticed something unusual with one bale. After cutting the twine and opening it, we found a somewhat flattened fawn. Benjamin Lockhart applied artificial respiration and revived it. He then took it to a veterinarian who placed one of the forelegs in a traction splint for a fracture. With such care the deer herd will never vanish in Berks County.—District Game Protector Harry H. Rickert, Kutztown.



Pittsburgh Pegasus

ALLEGHENY COUNTY—I was called by the control tower at the Greater Pittsburgh Airport on July 25, and was told that an airliner on landing had struck a deer on the runway. Accompanied by Deputy W. E. Haines, we proceeded to the airport. Upon arriving I was informed that a truck was dispatched to pick up the deer, but when the truck approached, the deer got up and ran over a small hill at the end of the runway. We searched the area for a period of three hours but could not find the deer. I imagine the deer was not hurt too bad and is still in the area.—Acting District Game Protector, J. W. Way, Coraopolis.

Geese Don't Always Hang High

CRAWFORD COUNTY—The Ninth Student Class happened to take our first field trip and arrive at the Pymatuning Refuge in Crawford County during the annual molting season. During this period of the year the numerous Canada geese at the impoundment are unable to fly. Since there were 25 men readily available, the Commission used them to an advantage. We not only helped in the banding of approximately 100 geese but had an interesting addition to our field trip.—Student Officer Robert B. Shaffer.

Law Students

JEFFERSON COUNTY—As we were attending one of our first classes on the Game Law on the evening of July 2, a large doe ran up and stood about five feet from the windows in the classroom. She appeared to be intently listening to the subject under discussion which happened to be the passage of the Buck Law in 1907 which gave does complete protection. No wonder game is sometimes scarce during hunting seasons—they are studying the Game Law too.—Student Officer John B. Hancock.



Five Speeds Forward

NORTHWEST DIVISION—On July 28th Robert Shreffler of Nickle-ville was mowing a field of hay when his boys saw what appeared to be a rabbit with one hind leg dragging. Thinking that it had been cut by the mowing machine, the boys proceeded to run the rabbit down. You can imagine their surprise when closer examination revealed the half grown bunny had five fully formed legs, two forward and three aft. Some of the hunters in this vicinity are talking about giving up the sport, reasoning that as hard as it is to hit a rabbit with only four legs, what chance would they have against one with five.—Land Manager Donald M. Schake, Knox.

What Do Deputies Do?

LACKAWANNA COUNTY—When we hear the term "Deputy Game Protector most of us immediately picture a person who is primarily interested in enforcing the Game Laws. However, quite often they perform many other duties at the loss of considerable time and expense to themselves. Here is a typical example.

Over a year ago I received a simple squirrel damage complaint from a person and requested Deputy Game Protector Stanley Gretkowski to han-

dle the complaint. He stated that he would take care of it and placed several live traps on the premises and proceeded to remove the squirrels as they were caught. Several days ago I received a report from him which was as follows. From June 11, 1957, to June 11, 1958 he had trapped and removed 40 gray squirrels and a rabbit. To accomplish this he had driven his personal automobile slightly over 500 miles without any remuneration whatsoever. The above is only one example. Many more of our Deputy Game Protectors perform similar duties as they are requested to do so.—District Game Protector Stephen A. Kish, Avoca.

How Big The Bear

ELK COUNTY—While working at the Game Commission display at the Clearfield Fair during the last of July, a fairly large bear was held in a cage near our exhibit by the Old Town Sportsmen's Club from Clearfield County. As a part of their fund raising program for winter feeding they had a contest for the public to guess the weight of the bear. The bear actually weighed in at 320½ lbs. Showing how much a person can be fooled on the weight of a bear the highest guess submitted was 1650 lbs. There were a lot of guesses in the 700 lb. bracket.—District Game Protector Fred H. Servey, Jr., St. Marys.

*THEY MUST BE THE GUYS WHO
SHOOT ALL THESE 200 LB. DEER*



In Defense of Home

DELAWARE COUNTY—While on patrol one day in early July, I saw what appeared to be a robin's nest in a low locust tree. I stopped the car and walked toward the nest. As I approached I was immediately set upon by a pair of robins who started bawling me out in a manner that would make an Army sergeant timid in comparison. Their commotion soon brought other birds either to investigate or assist if they could. I stood in one spot and identified the following birds: Indigo bunting, Rose-breasted grosbeak, Cardinal, flicker, brown thrasher, black and white warbler, catbird, cedar wax-wing, brown creeper and wood thrush. The robin's nest contained three young birds. Nearby I also located the nest of the Indigo bunting.—District Game Protector D. S. McPeck, Glen Mills.

The Grass Only Seems Greener

YORK COUNTY—At a recent "Family Night" Sportsmen's Meeting, one of my remarks was the fact that game kill reports showed 512 deer killed in York County for the 1957 season. After the meeting one of the members reminded me that I was very helpful in putting him in the "dog house." When his wife heard about the number of deer in York County he had to try to explain why it was necessary to drive 200 miles to go deer hunting.—District Game Protector D. H. Fackler, Windsor.

Over The Meadow And Down The Hill Like 60

CAMBRIA COUNTY—The morning of July 3, I received a call from a farmer's wife, informing me that her husband had injured a fawn deer (doe) while mowing. She asked if she could keep and care for the injured deer. I informed her that it would be necessary that I pick it up. Not knowing just which farm she lived, I asked direction. Her reply was "We

live out the New Germany road, you know where the cars go 60 down the hill to get up the other side, the barn is on the right, house on the left, that's it." Directions were a little bewildering but I found the correct farm.—District Game Protector James Burns, Jr., Ebensburg.

Mexican Meanderer

CENTRE COUNTY—About 4 p.m. on August 3rd, Game Protector Ray Morningstar and I saw a large bird feeding on a road-killed rabbit along Route 220 near Milesburg, Centre County. Because the bird was a stranger to us, we parked our car and watched it. Traffic was quite heavy and the bird's feeding was interrupted several times. It was forced to fly up to a nearby tree but each time returned to the remains of the rabbit as soon as traffic permitted. The bird was about the size of a large hawk, black and white in color, and had red face patches. The legs were yellow and longer than most hawks. Later, by the use of bird guides, we were able to identify it as an Audubon's Caracara whose normal range is given as Lower California, Arizona, Texas and Florida through Mexico and Central America.—Waterfowl Coordinator Robert E. Latimer, Muncy.

Habit Forming

CLEARFIELD COUNTY—While en route to my home from the Training School on the weekends of July 12, 19 and 26, I observed a single grouse on the berm of the highway going down the mountain into Curwensville. The novelty of the situation was that the grouse was in the same spot on three different days and at different times. The question is: "Was it the same grouse?" It was interesting to note that on July 26 the grouse had her young off the side of the road. They were nearly full grown and in fine shape.—Student Officer Michael E. Christoff, Ross Leffler School of Conservation.



CONSERVATION NEWS



CONSERVATION ADMINISTRATORS AND POLICY MAKERS CON- VENE IN PHILADELPHIA MEETINGS OF AMERICAN FISHERIES SOCIETY AND INTERNATIONAL ASSOCIATION

More than 500 conservation leaders gathered in Philadelphia the week of September 7-12 to attend the 88th Annual Meeting of the American Fisheries Society and the 48th Annual Convention of the International Association of Game, Fish and Conservation Commissioners. These conferences offer conservation administrators and policy makers from all sections of North America a chance to discuss problems of mutual interest. M. J. Golden, Executive Director of the Pennsylvania Game Commission and William Voigt, Jr., Executive Director of the Pennsylvania Fish Commission were co-chairmen for the successful conventions. C. El-

wood Huffman, President of the Game Commission, was Chairman of the Time and Place Committee.

In opening ceremonies Monday morning, Maurice K. Goddard, Secretary of the Pennsylvania Department of Forests and Waters, representing Governor George M. Leader, addressed the officials on "Recreational Opportunities in Pennsylvania." The three-day meeting of the American Fisheries Society featured presentation of many papers on the technical, economic and research phases of modern fish management. Among subjects discussed before the International Association were Trends and Problems in Encroachments on Rural

HUNTER SAFETY AWARD donated by the National Rifle Association for presentation by the International Association to the state or province conducting the best program during the year is proudly displayed by Seth Gordon, right, Director, California Department of Fish and Game. Discussing the California hunter safety program with Mr. Gordon are, left to right, Louis F. Lucas, Deputy Executive Director, National Rifle Association; M. J. Golden, Executive Director, Pennsylvania Game Commission, and Miss Esther Gill, Secretary to Mr. Golden and former secretary to Mr. Gordon while he was with the Game Commission.



Land, Hunting and Fishing Opportunity in an Industrial Society, Recreational Access to Public Lands, Shooting Preserves and Their Place in Wildlife Management, Water Problems of the East, Coturnix Quail, Power Boating Problems, Pesticides, Public Hunting in Federal Refuges, and the National Recreational Resources Review.

Among resolutions adopted by the International Association were those urging that government and educators to recognize the importance of the biological sciences as well as the physical sciences, recommending that the U. S. Fish & Wildlife Services seek selective chemicals that can be used to control various species of undesirable fish, requesting the Fish & Wildlife Service to make a survey every 10 years of the economic aspects of hunting and fishing, creating a committee on water resources because of the uncoordinated planning, development and management of this basic and vital resource, urging the next Congress to amend the Federal Power

Act by providing that no license for dams or other structures that affect fish and wildlife resources be issued until plans have been approved by the Secretary of the Interior, urging Congress to double the current program of grants for construction of sewage treatment plants, asking federal and state land management agencies to confer with state game departments before entering into large-scale programs, with public funds, to eradicate browse, shrub and tree growth through mechanical, chemical and other methods.

Delegates to both conventions enjoyed trips to points of interest around Philadelphia on Wednesday including a boat inspection of the Delaware River and Bay to observe problems related to maintaining hunting and fishing opportunity in a highly urbanized and industrialized area, a bus trip to New Jersey's Tuckahoe Waterfowl Management area, a bus trip to the Brandywine Valley, and a trip to Valley Forge National Park.

PANEL MEMBERS who discussed the future of public hunting in America during the International's 48th Annual Convention in Philadelphia were, left to right: Jack Berryman, U.S. Fish & Wildlife Service; Dr. O. Earle Frye, Assistant Director, Florida Game & Fresh Water Fish Commission; Hayden Olds, Chief, Ohio Division of Wildlife; M. J. Golden, Executive Director, Pa. Game Commission; Dr. A. Heaton Underhill, Director, New Jersey Division of Fish and Game; Charles H. Callison, Conservation Director, National Wildlife Federation; and Lewis E. Martin, Assistant Director, Illinois Department of Conservation.



Forest Fires Hit New Low Mark

Forest fires were held to a record low of 83,400 nationwide in 1957, dipping below the 100,000 mark for the first time since records have been kept, according to the Wildlife Management Institute.

Figures compiled by the U. S. Forest Service show last year's record compares with 143,000 forest fires in 1956 and 200,800 ten years ago. The area burned was almost halved, dropping from 6,605,900 acres in 1956 to 3,409,000 in 1957. Fires burned $23\frac{1}{4}$ million acres ten years ago.

Much credit for the excellent 1957 record, the Forest Service says, is due to the American public. Three programs that were commended for creating public awareness of the destructive nature of forest fires were the Smokey Bear Campaign sponsored by the Forest Service and the State Foresters under the leadership of the Advertising Council; Keep Green Programs conducted by forest industries and the States; and the Southern Forest Fire Conference sponsored in New Orleans two years ago by the American Forestry Association.

The three major causes of forest fires during the past few years, the Forest Service reports, have been incendiaries, debris burners, and smokers. In 1956 incendiaries topped the list; in 1957 debris burners were first and started 16,181 forest fires on lands given organized protection.



Game Protector John Lohmann Retires From Commission Service

District Game Protector John H. Lohmann, well-known wildlife officer in Pike County, retires from state service on October 31 after 34 years of service. The veteran field employee of the Game Commission began his career on November 1, 1924 and has served in both Pike and Schuylkill counties. Fellow officers of the Northeast Division and Commission staff members staged a testimonial dinner in his honor at the Mountain Lake House, Marshalls Creek, on September 22nd and the sportsmen of Pike County also paid him tribute at a banquet in Milford on September 24.

PENNSYLVANIA HUNTERS HANDBOOK OFF PRESS

A new 64-page handbook covering essential information for every hunter in Pennsylvania has just been published by Pennsylvania Publications, Cresco, Pa. It contains articles on bow hunting, hunting bear, deer and wild turkey, waterfowl hunting and other important information for everyone participating in sports afield along with complete information on 1958 seasons and bag limits. Among the illustrations are maps showing wildlife restoration areas in the various geographical areas of the state, including location of state game lands, state forests, dog training areas, and farm-game projects. The booklet sells for \$1.00 and may be ordered from the publisher.



16th National Plowing Contest & Conservation Exposition Seen By 200,000 People In Hershey Last August

Pennsylvania's smoothly running "conservation team" did it. They put on the largest conservation show ever staged in eastern United States—the 16th National Plowing Contest and Conservation Exposition held at Hershey, Pennsylvania, August 21 and 22 of this year. More than two hundred thousand visitors walked, rode or flew over the 2,300 acres used in the conservation demonstration area. And they listened to notables such as Governor Leader, Donald Williams of the U. S. Soil Conservation Service and Ezra Taft Benson of the U. S. Department of Agriculture.

Six months were used in preparing this "World Series of Agriculture." Agronomists, Conservationists, Biologists, Foresters and Engineers worked around the clock to ready the area in record time. And more than a thousand workers recruited from the ranks of Federal and State

farm agencies and local groups helped put on the show.

Symbolic of the teamwork that made the two-day event a huge success was the "conservation wheel of cooperation" exhibit. Here a dozen government agencies and local groups featured their "tools" used in helping soil conservation districts get conservation on the farmlands of Pennsylvania.

Throngs watched the expert plowmen from twelve states turn the red Hagerstown silt loam soil of the Milton Hershey Farms into gleaming furrows. George Stamp, Watkins Glen, New York, proved his skill by winning the National contour plowing while George Linniger of Springport, Michigan won out in the level land competition. Both plowmen may represent the U. S. in the World Plowing Matches in Northern Ireland next year.

Yes, teamwork paid off. It helped twenty-five thousand guests see modern conservation practices being applied to the land. The highly organized wagon trains of 176 farm wagons drawn by tractors transported the visitors to areas where heavy machines were building farm ponds, diversion terraces, and waterways. Also viewed from the tour were demonstrations of tree planting, land drainage, roadbank work, irrigation, cover crops, wildlife planting and fish pond management. Busses shuttled the spectators to and from the demonstration areas. And a score of small planes gave air-minded viewers a birds-eye view of the conservation work being done in nearby soil conservation districts of Lebanon and Lancaster Counties.

One of the many centers of activity was the 26 acre tent city which

housed farm machinery exhibits. Here major farm equipment manufacturers uncloaked their latest developments in farm power. Special shows of power performance and tractor maneuverability were on display for the visitors who crowded the giant show.

A Lycoming County farm girl, Duanne Doeblor of Jersey Shore, Pennsylvania, reigned over the Conservation Exposition and Plowing Matches as "Queen of the Furrow." Her 2,300 acre domain was jam-packed with activities from rodeos to tractor tipping, fire fighting demonstrations to sheep dog trials, wagon trains, conservation air lift, and plowing—all went off like clock work. Team work paid off in making the 16th National Plowing Contest and Conservation Exposition a success.



CONSERVATION WHEEL at the 16th National Plowing Contest and Conservation Exposition featured the exhibit of the State Association of Soil Conservation Districts at the "hub" and exhibits of various agencies and organizations that help the soil conservation districts do their job, displayed around the "rim."



SMOKEY BEAR takes the "Hunt America Time" pledge after passing out pledge cards to these school children. The conservation minded youngsters will take the cards home for their fathers to sign as part of the Izaak Walton League program to improve hunter-landowner relations.

PENNSYLVANIA

SUNRISE-SUNSET TABLE

The following times of sunrise and sunset are based on the 77th Meridian which runs north and south through Eastern Adams County, Harrisburg Airport, Williamsport and Eastern Tioga County. Times shown are EASTERN STANDARD TIME.

Hunters in localities east or west of the 77th Meridian should note that there is a considerable variation in sunrise-sunset times from those shown before (as much as 8 minutes earlier in Philadelphia and 12 minutes later in Pittsburgh). Check your local weather station for correct information.

Date	Sunrise	Sunset	Date	Sunrise	Sunset
October	a.m.	p.m.	October	a.m.	p.m.
1	6:03	5:50	17	6:19	5:25
2	6:04	5:48	18	6:20	5:24
3	6:05	5:47	19 Sunday—No	Hunting	
4	6:06	5:45	20	6:22	5:21
5 Sunday—No	Hunting		21	6:24	5:19
6	6:08	5:42	22	6:25	5:18
7	6:09	5:40	23	6:26	5:17
8	6:10	5:39	24	6:27	5:15
9	6:11	5:37	25 No Hunting	Before	
10	6:12	5:36		8:00	5:14
11	6:13	5:34	26 Sunday—No	Hunting	
12 Sunday—No	Hunting		27	6:30	5:11
13	6:15	5:31	28	6:31	5:10
14	6:16	5:30	29	6:32	5:09
15	6:17	5:28	30	6:33	5:07
16	6:18	5:27	31	6:35	5:06

(To Be Continued Next Month)

SPECIES	OPEN SEASONS		DAILY BAG LIMITS	MAXIMUM POSSESSION LIMITS	LEGAL SHOOTING DAYS AND HOURS (SUNDAYS EXCEPTED)	
	FIRST DAY	LAST DAY			Unlawful to hunt for any wild bird or animal, including migratory game, on	Unlawful to hunt for any wild bird or animal, including migratory game, on
Sora	Sept. 1	Nov. 8	25	25	Sept. 1 to Nov. 8	1/2 hr. before sunrise to sunset
Rails (except Sora);						
Gallinules	Sept. 1	Nov. 8	15	30	Sept. 1 to Nov. 8	1/2 hr. before sunrise to sunset
Woodcock	Oct. 15	Nov. 22	4	8	Oct. 15 to Nov. 22	1/2 hr. before sunrise to sunset
Wilson's or						
Jacksnipe	Oct. 15	Nov. 13	8	8	Oct. 15 to Nov. 13	1/2 hr. before sunrise to sunset
Doves	Sept. 1	Nov. 4	10	20	Sept. 1 to Nov. 4	12:00 o'clock Noon to sunset

NO FEDERAL STAMP REQUIRED TO HUNT SORA, RAILS, GALLINULES, WOODCOCK, JACKSNIPES AND DOVES; STAMP REQUIRED TO HUNT DUCKS, GEESSE, COOTS, AND BRANTS.

Ducks	Oct. 15	Dec. 13	4	8	Oct. 15 to Dec. 13	1/2 hr. before sunrise to sunset
(Daily bag limit may include 1 wood duck; possession limit 2.)					Oct. 25 only	8:00 A.M. to sunset
(Daily bag and possession limits may include 1 hooded merganser.)						
(Daily bag limit may not include more than 2 canvasbacks or 2 redheads, or 1 canvas-back and 1 redhead; possession limit may not include more than 4 canvasbacks, or 4 redheads; or 4 in the aggregate of both canvasbacks and redheads.)						
Mergansers (American and Red-breasted)	Oct. 15	Dec. 13	5	10 (not to be counted in daily bag and possession limits on other ducks)		
Geese (except Snow)	Oct. 15	Dec. 13	2**	4**		
Coots	Oct. 15	Dec. 13	10	10		
Brant	Oct. 15	Dec. 13	6	6		

MIGRATORY BIRD HUNTING METHODS

Permitted: Bow and arrow, or shotgun not larger than 10-gauge, fired from shoulder (including hand-operated and semi-automatic repeating shotgun of not more than 3-shell capacity, which must be plugged to 3 shots so that plug cannot be removed without disassembling the gun); dog, blind; boat propelled by hand; floating device other than sinkbox; artificial waterfowl decoys. Injured or dead waterfowl may be picked up by means of a motorboat, sailboat or other craft. Shooting is permitted from a boat or other craft having a motor attached if such craft is fastened within or tied immediately alongside of any type of stationary hunting blind.

Prohibited: Use of electrical devices or recordings in taking migratory game birds; all rifles; live bird decoys; automobile; aircraft; sinkbox (battery); power boat, sailboat, or any device towed by power boat or sailboat. Waterfowl, coot, gallinules and doves may not be taken under any circumstances by the aid of salt, or shelled or shucked or unshucked corn, wheat, or other grains, or other feed or means of feeding similarly used to lure, attract, or entice such birds to, on, or over the area where hunters are attempting to take them. As used herein the terms "salt or shelled or shucked or unshucked corn, wheat, or other grains," or "other feed or means of feeding similarly used," shall not be construed as including salt

blocks, properly shocked grain, standing crops (including aquatics), flooded hunting crops, flooded harvested crop lands, or, in connection with the hunting of waterfowl, coots and gallinules, grains found scattered solely as a result of normal agricultural practices, or, in connection with the hunting of doves, grains found scattered solely as a result of normal agricultural harvesting. Waterfowl may not be hunted by means, aid or use of cattle, horses or mules and no motor-driven land, water or air conveyance or sailboat may be used to concentrate, drive, rally or stir up waterfowl or coots.

FEDERAL STAMP FOR MIGRATORY BIRD HUNTING

It is unlawful for a person over the age of 16 years to take migratory waterfowl unless he carries on his person an unexpired Federal Migratory Bird-hunting Stamp, validated by his signature written in ink across its face. Not valid after June 30 following date of issue. **This stamp is not required to hunt Sora, Rails, Gallinules, Woodcock, Wilson's or Jacksnipe and Doves.**

** Not more than 2 geese of any kind (except Snow Geese) in a straight or mixed bag a day, or 4 singly or in the aggregate in possession.

NO OPEN SEASON—SNOW GEESSE AND SWANS.

Pennsylvania Official 1958 Open Seasons and Bag Limits

(Regulations apply for Hunting License Year, September 1, 1958 to August 31, 1959)

Open season includes first and last dates listed, Sundays excepted, for game. The opening hour for small game, migratory game birds and other wild birds or animals on October 25 will be 8:00 A. M., EST. On other opening days, and otherwise during the season for upland and big game, the shooting hours daily are from 7:00 A. M. to 5:00 P. M., EST, excepting from July 1 to September 30 inclusive, 6:00 A. M. to 7:30 P. M., EST, and the hours for the October archers' deer season, which are 6:00 A. M. to 5:30 P. M., EST.

UPLAND GAME (Small game possession limits below)	BAG LIMITS		OPEN SEASONS	
	Day	Season	First Day	Last Day
Ruffed Grouse	2	8	Oct. 25	Nov. 29
Wild Turkeys	1	1	Oct. 25	Nov. 22
Squirrels, Gray, Black & Fox (combined)	6	30	Oct. 25	Nov. 29
Ring-necked Pheasants, males only	2	8	Oct. 25	Nov. 29
Rabbits, Cottontail	4	20	Oct. 25	Nov. 29 and
Rabbits, Cottontail (not more than 20 in combined seasons)			Dec. 27	Jan. 3, 1959
Bobwhite Quail	4	12	Oct. 25	Nov. 29
Hares (Snowshoe Rabbits)	2	6	Dec. 27	Jan. 3, 1959
Raccoons (hunting or trapping)	Unlimited		Sept. 1	Aug. 31, 1959
Woodchucks (Groundhogs)	Unlimited		Sept. 1	Aug. 31, 1959
Grackles	Unlimited		Sept. 1	Aug. 31, 1959
Squirrels, Red (closed October 1 to 24, incl.)	Unlimited		All mos. (exc. Oct. 1-24)	
Bears, over one year old, by individual	1	1	Nov. 24	Nov. 29
Bears, as above, by hunting party of three or more	2	2	Nov. 24	Nov. 29

DEER:	Bow and Arrow Season—Either sex, regardless of size. (Requires Hunting License and Archery License, but no Antlerless Deer License)		(only one deer for combined seasons)	Oct. 4	Oct. 24
	ANTLERED DEER—Regular Season—Male with two or more points to one antler: Provided, a male deer with an antler three or more inches long without points, measuring from the top of the skull as the deer is in life, shall be considered legal, by individual		1	1	
	ANTLERLESS DEER SEASON—(Requires Hunting License and Antlerless Deer License), by individual				Dec. 1
					Dec. 13
					Dec. 15, 16 and 17

NO OPEN SEASON—Hungarian Partridges, Hen Pheasants, Sharp-tailed Grouse, Cub Bears, Elk, Otters.

FURBEARERS:

Skunks and Opossums	Unlimited	Sept. 1	Aug. 31, 1959
Minks	Unlimited	Nov. 22	Jan. 17, 1959
Muskrats (traps only)	Unlimited	Nov. 22	Jan. 17, 1959
Beavers (traps only) state-wide	5	Feb. 14	Mar. 21, 1959

SPECIAL REGULATIONS

POSSESSION AND TRANSPORTATION LIMITS of legally-killed small game shall mean not more than the daily limit for the first day nor more than an accumulated total for each succeeding day of the open season for each species; but not in excess of the season limit, regardless of where held, stored or found in possession.

DEER—Even though there are three separate seasons for taking deer, a hunter may not kill more than one deer during the three combined 1958 seasons, whether hunting individually or with a camp or hunting party. An Archery License is required during Bow and Arrow Season, issued only by County Treasurers at a fee of \$2.15, and the Department of Revenue, Harrisburg, at a fee of \$2.00. Antlerless Deer Licenses are issued only by County Treasurers at a fee of \$1.15, and valid only in the county for which issued. Farm occupants may hunt for deer during the Archery Season and the Special Antlerless Deer Season without a license on lands resided upon, or those immediately adjacent with the written consent of the owner or lessee. Under the law, no application for an Antlerless Deer License shall be approved, or license issued, to a nonresident prior to November 15, or after December 14, 1958.

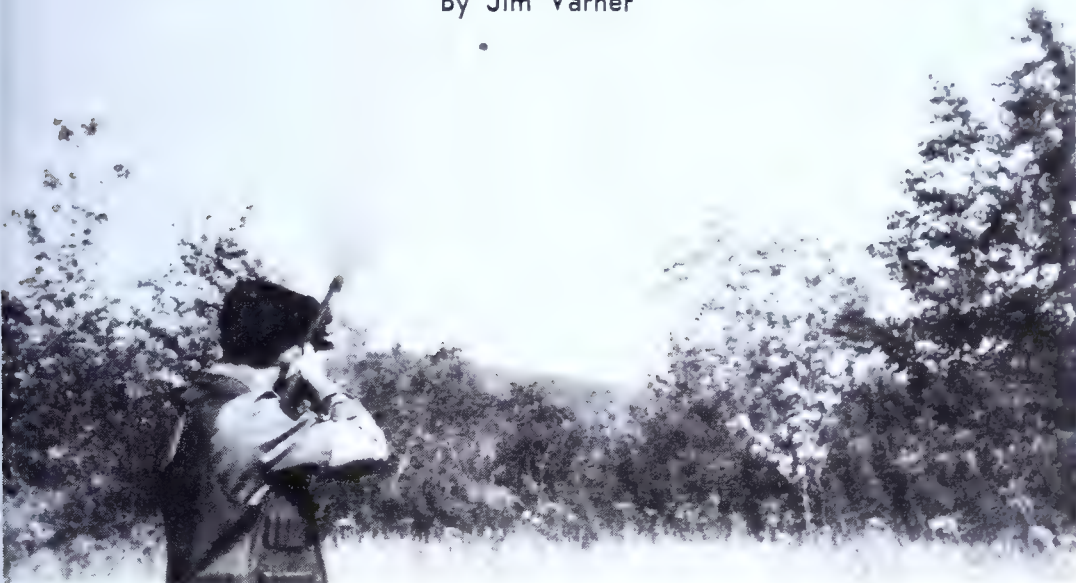
BEAVERS—No trapping at Commission-posted dams. Nonresidents may not trap beavers. One person may set, tend or operate 10 traps only. Traps must not be set on the structure of any beaver dam or house, or within 25 feet of the waterline on the structure of either thereof. Tags must be kept above ice or waterline to facilitate identification without disturbing traps. Pelts must be tagged within 10 days after season, and may not be sold or otherwise disposed of until properly tagged. Present them to the Game Protector in District or County where trapped.

TRAPPING—Traps for furbearers not to be placed, staked or set before 7:00 A. M. on the first day of open seasons. The season indicated for Trapping closes at 12:00 o'clock Noon on last day. Traps must be tagged with metal name tags

SNARES—The use of snares is prohibited in all counties except by special permit.

Let's Talk About Shotguns

By Jim Varner



TIME has tapped Summer gently on the shoulder and told her to move on. It is time for the autumnal pageant to spread its glory as the countryside prepares for the long winter siesta. Perhaps October means more to the sportsman than any other period of the year. The cold crispness of the air, the brilliant harvest moon, the pungent leaf smoke odors and the colorful landscape mean that real days afield are irresistibly calling.

When I left you fellows last month we were in a huddle preparing our shotguns and planning a safer and more enjoyable season. The Game Commission hunter safety program has been favorably received. The press as a whole has been cooperative; radio and TV programs have

featured their share; we seem to be blessed with an abundance of natural food for wildlife, so let's talk about shotguns and the game we seek.

In some parts of Pennsylvania dove shooting is popular. This fast little game bird can test the skill of the best wing shots. Many southern and southwestern sportsmen consider dove shooting right in a class with quail and grouse. As a rule No. 7½ or 8 shot is preferred in the trap load category, using a gun bored improved cylinder or modified choke. Light to medium weight guns in 20 to 12 gauge are satisfactory. As the season advances and the birds become wilder the experienced gunner may use full choke or modified guns with express loads of No. 6 shot. The shooter who can bag 40 to 50 percent of these birds on pass shooting can consider himself a good game shot. Young doves in early season are not too difficult. One will find them around grain fields, old orchards and near water holes where they spend considerable time. They flush



easily but often at long range. This type of shooting requires a knowledge of leading and holding over as one does from the 21 yard rise in regulation handicap trap shooting. Study your game laws and do some dove shooting which comes in early to sharpen your reflexes for more serious gunning.

Woodcock is another interesting little game bird and elusive target for the early season nimrod. Somehow the mysterious little "timber-doodle" or "owl-snipe," as our Quebec friends call him, intrigues me. One never knows where to expect him or where he might be. Today you may hunt the alder thickets, the edge of swamps and bogs, dense briar patches mixed with sweet ferns, or willow and cottonwood bottoms and not flush a single bird while a fellow sportsman scouring the uplands finds a few scattered birds. Tomorrow you may go over the same area and get your limit for the day if you shoot well.

This little brown fellow about the size of a man's fist with a long rubbery beak, mottled wings and head, large round eyes in the top of his head, presents a fast and shifting

flight. At the best this twisting darting characteristic causes a lot of unaccountable misses. As a rule the "timber-doodle" is flushed close and a light open bored shotgun with the lightest of skeet or trap loads in 7½, 8 or 9 shot should be used. Many woodcock and small bird shooters prefer No. 9 shot. I personally see little use for shot as small as 9 or 10, except from a safety standpoint. The frail tender body of this grand little denizen of the bogs makes him easy to kill. A quick eye and snap shooting technique is required with the shooter trying to clobber mister "doodle" at the top of his flight which is usually just above the brush he is working in. A good dog that works close is a great help. The birds color presents a perfect camouflage that makes him hard to locate when down.

Along with the open season on quail we have Ruffed Grouse or partridge as some call him. What a game bird is this native inhabitant of our old orchards, mountainsides, briar patches and hemlocks. Am I wrong in considering him tops in his category? Somehow his thundering get-away over the tops of the colorful

CORRECT LINE-UP for hunting is demonstrated by these young members of a National Rifle Association club. The hunter on the right holds the barrel of his gun to the right and away from the center and left flank hunter. The middle man keeps his muzzle straight ahead or up in the air. The hunter on the left keeps his gun muzzle to the left.





WORTHY COMPANION is the hunter who plays it safe by being careful when he sees brush moving. His pal and their dog are in that thicket to the left. A shot fired in haste can never be recalled.

sumac, woodbine and aspen thickets registers a thrill to me no other game-bird can duplicate. I would call him king of the upland. Being our State bird, I believe others consider him king. Proper stance, cool coordination of eye and reflexes combined with a perfect fitting shotgun are necessary for success when our nimrod flushes this little thunderer.

Young birds ahead of a good dog are not so difficult, and to the hunter without a dog I suggest you work slowly and carefully into the wind. If the woods are noisy that's another problem. Old birds of two or more years experience know all the tricks in the book to confuse their enemy. They sneak out ahead of you in many cases without any flight noise. If you do have any success in such a case it's usually with a full choke gun and express shells using 6, 5, or 4 shot.

Last November I was fortunate enough to bag two of these old timers, one during a duck hunting trip. The first one flushed along the edge of a Susquehanna river bottom cornfield some 35 yards ahead and quartering to my right in a rapid

climb toward his high mountain ledge retreat some 200 yards away. It was such an unlikely place for a grouse to be I lost time checking closely to make sure it was not a hen pheasant. I was using one of my favorite arms, a model 12 Winchester Trap, full choke with ventilated rib that is sighted high for raising clays in trap shooting. My shell was a hand load equivalent to 4 drams propelling 1½ ounces of No. 3 copper plated shot. When I did decide the game was legal, I swung rapidly from behind and as the barrel raced high and some four lengths ahead I squeezed the trigger. The blur of rapidly beating wings folded up stone dead. It lay fluttering just 66 long steps from where I stood. Apparently it had flown right into the center of this excellent load's pattern—a load I have tested and retested at ranges up to 70 yards.

Don't get me wrong I am not always this fortunate. As I grow older and use bi-focal glasses my reflexes are not up to par at times. Despite the fact the shot was one a fellow likes to remember, I felt some remorse when I placed the little speed

demon in my coat. You old-timers have made lots of shots whose memories you cherish and you beginners have many such thrills coming. But somehow you will feel the same as I when you bring to an untimely end the career of this king of the uplands—this “old-timer” who has outsmarted all the hunters that scoured his domain for two or more seasons.

Right in there with our native upland birds the shotgunner has the colorful “chink” or ringnecked pheasant to test his skill. Very little need be said about this, our most popular upland bird. Today it is raised in such large numbers it takes a lot of hunting pressure off our native game. These birds revert back to the wild quickly, soon become cagey and hard to bag through their skillful hiding tactics, and afford all types of angle and overhead shots. It's an excellent game bird and fairly hard to kill. Use modified and full choke guns with express or magnum 4's, 5's, or 6's for cornfield and other long range shooting. Many successful nimrods use standard trap loads or equivalent in 6's for early season work. These

experienced shooters pass up long shots that may mean escaped cripples.

I have probably worn out the duck shooters' patience by talking too much about upland game and guns for same. However lay aside those balsa wood blocks you have been whittling on and we will start a pow-wow on the subject of migratory fowl. That subject takes in a variety of fowl, guns, shells and ideas on how it's best accomplished. While I have hunted them extensively from the grain fields of Iowa, along the great Mississippi flyway to our Pennsylvania beaver dams and rivers, I still find I have a lot to learn. The subject is so varied and interesting to the wildfowler I hope to devote an entire article to this sometime.

While we have a shorter season this year we still have a lot of sport ahead. There seems to be a goodly number of locally raised birds for the opening, mostly blacks, green-heads, wood-ducks, with a sprinkling of teal and others. The early season shooting is comparatively easy and one can enjoy the lighter loads and more open guns if he possesses more

EARLY SEASON duck hunting with decoys on a beaver pond or marsh calls for skill and marksmanship. Most hunters have not had sufficient practice before taking to the field and their aim and reflexes are not perfect. To be safe and to avoid unnecessary crippling loss of waterfowl, practice before you start hunting.



than one fowling-piece. Later in the season and especially when the northern birds arrive, it's best to have plenty of express and magnum loads in 4's, 5's, 6's and perhaps a few 2's.

Wildfowl hunting with all of its hardships in rain, snow, cold and blizzard is in a class all its own. There's no more thrilling sight than to watch a flock of cautious gimlet-eyed old mallards swinging wide of your decoys headed by a long necked green headed old drake who is skeptical of your blind. Here's where experience, judgment and skill is necessary. Freeze in your position and don't be one of those "clucks" that spoils it for everybody by letting loose a barrage at birds over 100 yards out. Get them in as close as you can because they have a habit of moseying out of range all of a sudden. Fair shooting can be found along our rivers after the freeze up.

Try to avoid crippling shots that causes waste to you and your fellow sportsman. Take enough interest in your sport to know the limitations of your firearm and the load you are using. This knowledge should have been learned weeks before the season opened. Don't offer alibis and excuses as most misses, failures to kill cleanly and other disturbing features that may arise in a day's hunt are all your fault. Don't condemn any manufacturer or his product without a fair testing. There is not a poor shotshell or rifle cartridge made in the U.S.A. today by any of our manufacturers. Few gunners take time to test different loads and know little about their ballistic properties.

Repetition they say is odious but I am going to hammer a lot on Hunting Safety. Fellows, shotguns are short ranged but dangerous. Respect them as such. Light twelve gauge trap loads are loaded with 7½'s, 8's, and 9's to a muzzle velocity of approximately 1200 feet per second, and the instrumental, or average, velocity of these loads is around 850

feet per second over the 40 yard range. Express and magnum shells in the same gauge using 6's or larger develop around 1300 feet per second at the muzzle and near 1000 f.s. instrumental velocity at 40 yards. No. 4's to BB's in these same loads have slightly higher velocity due to their weight. Smaller gauge gun's velocity runs 25 to 50 feet per second less contrary to a lot of shooter's opinions. The game killing range is about as follows; 9's—35 yards; 8's and 7½'s—40 yds.; 6's—45; 5's—50; 4's—60; 3's—70, with 2's, and BB's being potent to 75 yards. The killing potential will vary five or ten yds. each way according to loading, while their maximum carrying range at 30 degree angle is approximately five times as great as the game killing range. For instance BB's will travel 450 yards with maximum loads.

As we leave you this fine autumn month we can only say "have fun with your scattergun." Play safely at all times and help the drive to prevent needless accidents. Rabbit hunting with or without dogs calls for low ground shots as well as does some other game that is seen running on the ground. Take your time and know where your dog and partner are before you shoot. Don't shoot into moving brush and wear bright red or yellow clothes. Remember the killing and maximum range of your weapon. Don't try to use express shells or magnums in light guns for all purposes unless you wish to become a chronic flincher—in other words don't be over-gunned. Bear in mind a 4 dram 1½ ounce load fired in a light 12 gauge gun develops some 40 foot pounds of free recoil. That's more than twice the recoil of the 30-06 big game cartridge. Can you absorb that all day and enjoy your sport? With all of this T.N.T. you gain some 10 to 15 yards range, over a 3¼ dram 1¼ ounce load in the same size shot. Is it worth it? Think it over.



Competitive Family Sport

By Tom Forbes

ASK a bowman why archery has become so popular as a sport and if he has given the question any thought he will probably say; "Bow hunting during the any-deer season for archers in the early autumn." Now it cannot be denied that an impressive number of archers have taken to the hunting field in Pennsylvania the past few seasons. From 5,442 licenses issued in 1951, the number has increased each year to a high of 55,554 in 1957 and informed opinion is that the number may be close to the 100,000 mark for the 1958 any-deer archery season. Since hunting with a bow for big game has a certain news value this phase of the sport receives the greatest amount of publicity and the general public is unaware of the recreational value of archery as a sport in which a family group may participate.

Throughout the entire width and length of the Commonwealth many long established Fish and Game Clubs have found that a nucleus of archers among their membership has revitalized the club. Facilities either dormant or little used are again in active use. Entire family groups spend the day at the club. Small children use the swings, and sand boxes and slides, while Junior and his or her parents compete in a tournament.

Unlike other competitive sports, which by their nature divide participants into Men, Women and Children, archery permits and encourages the entire family to shoot together. Parents are able to enjoy outdoor recreation with their children and the young folks quickly learn and appreciate the days present in the outdoors. Picnic tables and fireplaces for meals are an added attraction which every member of the family enjoys.

Children need the companionship of their parents and archery is ideally organized to further this need. A





PRELIMINARY PRACTICE should be a must before starting a round of competition. Junior may be shooting a light weight bow but his equipment will be just as good as that carried by his elders.

field course is somewhat similar in layout to a golf course. Targets take the place of the familiar greens and cups and play progresses from target to target. There the similarity ends. There is no age limit, nor is ability measured by years or sex. Grandfather may outshoot his grandson or vice-versa. Mother may be the outstanding shot in the family group.

Archery clubs have become so numerous that there is probably a club and a field course within a short driving distance of any urban center. You would do well to make inquiry and arrange for your family to enjoy this healthful and exciting sport.

FAMILY COMPETITION in a beautiful woodland setting is a feature of archery field courses. When a modern bow is brought to full draw, power and beauty are combined in its graceful shape.

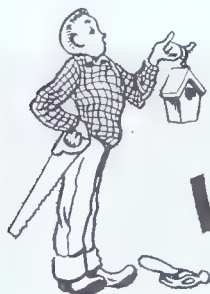


PLAY FACILITIES for the "small fry" who are too young to shoot the course with their parents should be provided by every archery club. A safe and secluded place to play will keep the smaller children occupied and happy.



BOTH YOUNG AND OLD can enjoy the sport of archery. Even the family dog can tag along, providing it is kept under control and does not interfere with the shooting on adjacent targets.





OUTDOOR FUN WITH A FUTURE



Know Your Gun Or Bow

By Ted S. Pettit

EACH year a large number of game birds and animals are shot at, hit, but not killed. They escape to suffer and die out in the marsh or deep in the woods, and they represent a tragic waste of an important natural resource.

The chief reason for this waste, probably, is that some gunners or bow hunters do not know the limitations of their weapons, and because of lack of practice, cannot judge distance accurately enough. Too many of us put our guns away at the end of the season and do not see them again until the next season opens. We then warm up on live game. It takes time to recondition our reflexes and our shooting eye, and in that time we may cripple—and waste—too many animals. On top of that, we cause a lot of needless suffering and are subject to the criticism of anti-shooting groups.

Conservation, generally, is defined as meaning "wise use." It means use without waste. Thus it is the best kind of conservation for the hunter to know his gun or his bow and what it will do and will not do. It is necessary, too, for the hunter to know his ability and what he can do and what he cannot do.

Now is the time to get out "old Betsy"—shotgun or rifle—and round up some friends for some practice sessions. Now is the time to recondition reflexes, tune up your shoot-

ing eye, and practice judging distance, speed, lead, and other factors that make the difference between a clean, well placed hit, or a near miss that cripples an animal or wastes meat.

Some Practice Games

Any kind of practice necessarily involves a safe place to shoot. For



rifles, this means a good backstop—either gun club range or a high sand bank free of large stones or rocks or trees that could cause a ricochet. It also means marking the range to warn others who might walk into the line of fire.

For shotgun games, a large field with about 300 yards of open area, is large enough for safe clay bird shooting.

The following rifle games are designed for 22 caliber guns, either single shot or repeaters. They may be adapted and changed slightly for large caliber guns.

In either case, the first step is to "sight in" the gun so that you can pinpoint your shots. This can best be done from a prone position, and using a sand bag rest. Many shooters shoot three shots to get a group. Then they adjust their sights, and shoot three more shots at a new target. They do this until they get a tight group in the block at the distance where they think they will do the most shooting.

A good game to try after you've sighted in your gun and you want to test yourself for accurate shooting is this: For a 50 foot range, use 3' x 5' file cards and raw heavy pencil or ink lines diagonally from corner to corner. Make four for each shooter. Tack them on the target frame in front of the backstop. The object is hit the point where the diagonal lines cross. Shoot one shot at each of four cards, from prone, sitting, kneeling and standing positions. The winner has the most shots closest to the crossing lines.

Next, use these same type of targets and shoot standing, one shot at each of five targets, rapid fire. Each shooter has his own targets, and five shells in his hand for a single shotgun or in the magazine (not the chamber) for a repeater. At the signal all shooters shoot. The first one through gets ten points, the second one seven points and the third five.

Add to these points, five points for the shot on each target closest to the crossing lines. Figure this by superimposing all targets on top of each other (after writing the shooters name on the card) and pushing a pin through the bullet holes.

Bustible Bullseyes—commercially manufactured disks that break when hit, can be used for several different games. If these are not available, use candy mints that are about 1" in diameter, and flat.

For beginning shooters, mount the Bustible Bullseyes or mints on a board, five for each shooter. See who can hit the most out of five shots.

A variation is to mount ten or twelve on a board. The first shooter shoots till he misses. The second does likewise, etc. The one that breaks the most, wins.

Another variation is similar to the rapid fire contest at cards. This time, see who breaks five bullseyes, or mints, in the fewest shots, in the fastest time.

Probably the most fun of all is provided by a game that requires a little preparation. You need a board ten or twelve feet long, 8 inches wide and one inch thick; 16 thumbtacks; 8 pieces of thread or string 6 inches long; and 16 Bustible Bullseyes, or candy mints.

Draw a line the length of the board on one side one inch down from the top edge. Mount the board on the target rack in front of the backstop. Along the line, push in the thumbtacks in pairs, six inches apart with eight or ten inches between the pairs. There should be about $\frac{1}{4}$ " to $\frac{1}{8}$ " of space between the tack head and the board.

Next, tie the bullseyes or mints to the pieces of thread, so that each piece of thread has a target tied to each end. Now hang the thread over two tacks, so that the targets are flat, and the same distance from the tacks. Now when one target is

broken, the other falls to the ground. Next, with some paint, mark one target in each pair and agree on which shooter aims the left target of each pair and which one shoots at the right.

This is a rapid fire game to see which shooter can break his target first causing his opponents to fall so it cannot be hit.

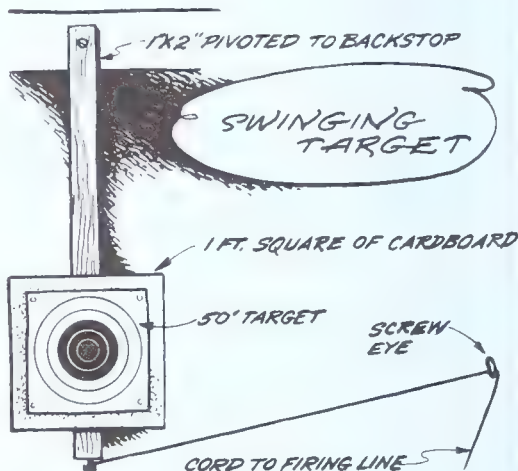
Swinging Target

Shoot at fifty feet. Drill a one quarter inch hole near one end of a three foot long piece of one by two. On the other end, fasten a foot square piece of celotex or heavy cardboard. Fasten a standard 50 foot target (or draw one) on the celotex or cardboard.

Push a nail through the hole in the one by two and drive it securely into the backstop, but not so far that the one by two will not swing back and forth freely.

Tie a long piece of heavy cord or twine to the one by two, and run it through a screw-eye in one side of the backstop, and back to the firing line. Then when you pull the string, the target will swing back and forth. Try pulling the cord until the target is pulled up as far as it will go. Then let go of the string. The target should swing back and forth several times before coming to rest.

Try this from a prone or sitting position first. Shoot five shots each. Between shots, pull the target up



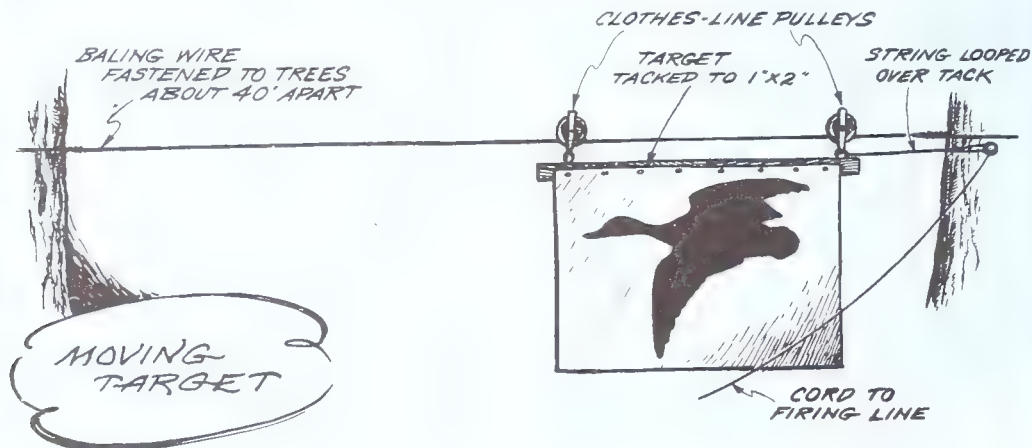
as far as it will go, then release it. The target must be moving when you shoot. High score wins.

Moving Targets

Shoot of fifty or seventy-five feet. Be sure of your background.

Use two trees or two poles forty feet apart or nearly so. Stretch a piece of heavy baling wire between the trees so one end is eight feet from the ground and the other end two feet from the ground.

Fasten a small clothes line pulley to each end of a 2 foot piece of one by two, and hang the pullies on the wire. Move it to the high end of the wire and let go. If it slides down the wire too fast, lower the high end of the wire a foot or two, and try again. When you adjust it so that it moves



fast enough so that a target hanging from it will be fun to shoot at (not too slow, but not too fast) fasten a short piece of string to the one by two. Stick a tack in the tree or post at the high end of the wire and loop the string over the tack. This will hold the sliding target holder at the high end of the wire.

Tie on long piece of cord to the tack and run the cord back to the firing line. When you pull the cord, the tack comes out and the target slides down the wire. Try it a few times to be sure it works easily.

For targets you can use regular paper targets, or cardboard cutouts of crows, quail, pheasants, grouse or ducks.

To make these cut-outs, make a rough sketch of the flying bird on a piece of cardboard, or trace the outline from a large calendar illustration or counter display advertisement that your sporting goods dealer may give you. Some gun manufacturers distribute such displays, or may have ready-made targets.

Trace these patterns on cardboard or celotex, cut them out and fasten them to the sliding target holder.

Fasten the target at the high end of the wire, and take your position on the firing line. When you say pull, your companion pulls out the tack, and down goes the target. Unload your gun, open the action, and lay down the gun, while you and your companion check your shot and set up the target for the next round.

At first, the most hits for each five shots will determine the winner. But as you practice and improve, you may want to score by location of hits on the target. Head or neck shots count 10; body shots count 8; wing or tail shots count 4.

Shotgun Games

Twenty-two caliber shotgun shooting, called moskeeto, is a lot of fun and certainly teaches you to get on

the target fast. The smaller clay birds only fly about 50 feet from the smaller trap and the shot forms a pattern of about 15 inches in diameter at that distance. As a starter, if you have, or can use, one of these outfits shoot straight trap. Put the trap on a sturdy base and shoot at five birds from each of five positions in a semi-circle with the trap on the perimeter.

Next, stand in front of the trap, to one side, and have your companion toss out birds so that you do not know where they are going. Ask him to throw them high, low and to each side.

For large gauge shotgun practice, a hand trap provides good sport and excellent practice for hunting.

After practice with your companion throwing out straight birds, have

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him stand behind you where you cannot see him. Then ask him to try and fool you by throwing low birds, high birds and by giving you a variety of shots.

The next step is go for a walk in a field or brushy area, with a companion who carries a hand trap and supply of birds. Carry your gun in a ready position since he will throw birds when you least expect it, and try to fool you completely on how and where they go. He may even have a few birds painted white which represent hen birds which you are not supposed to shoot at.

Another good shotgun game depends upon a good windy day and suitable location. But on such a day, blow up some penny balloons and tie them up. Then throw them up in the air, and when they get twenty yards or so away, try to break them.

Archery Games

The first step in archery practice for hunting is much the same as with a rifle. Practice on a standard 3 or 4 foot target until you can shoot

tight groups with four arrows. Make sure that each shot goes exactly where you want it to go from 30, 40 and 50 yards.

The next step is to rig up a field archery course. Use hay or straw bales and animal silhouette targets, placed out in fields and woodland edges in the same sort of situation over which you will hunt later on. Shoot at these targets for varying distances so you get practice in judging distance. Practice also shooting from various angles.

Tying balloons on a straw target and trying to break them from 50 yards is also good practice, especially if the wind is moving the balloons around.

All of these games—rifle, shotgun and archery—are fun in themselves and call for skill with firearms or bow. But more than that, they provide excellent practice for the coming hunting season. It's good conservation to practice now on inanimate targets, so you will waste fewer live ones later on.

Antlerless Deer Licenses Go On Sale October 6

All county treasurers will have antlerless deer licenses on sale, as well as the applications for them, during the week beginning October 6, the Department of Revenue reports. The applications will not be available until the licenses go on sale. This license may be purchased only from the treasurer of the county in which the buyer will hunt deer without visible antlers during the December 15, 16 and 17 season. The cost is \$1.15.

Farm occupants may hunt antlerless deer without a license during the three-day season on lands they reside upon, also on those immediately adjacent with the written consent of the owner or lessee. Under the law no application for an antlerless deer license shall be approved, or license issued, to a nonresident prior to November 15 or after December 14, 1958.

For the convenience of hunters, applications for antlerless deer licenses will be available, sometime in October, at the establishments of issuing agents other than county treasurers, at the Game Commission field division offices and the Commission office in Harrisburg. Applications may be obtained also from the miscellaneous license section of the Department of Revenue, Harrisburg.



Frosty-Pumpkin Autumn Days

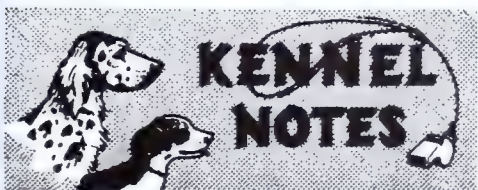
By Horace Lytle

YEARS ago a valued, older hunting friend told me something I've never forgotten, and have tried ever since to follow. He said: "Before you can succeed with any dog, you've first got to *reach* him." So I'm passing that on now to you all.

To "reach" a dog means to gain his confidence and win his loyal affection. You thus *reach* his heart—the shortest cut there is to his head. Which simply means a greater depth of *understanding* between the two of you. He will more readily grasp what you want him to do as you communicate to him what that may be. And when he knows what it is, his

heart will urge him to win your approval—and give you pleasure.

Does this mean the dog is never to be punished? No, it does not. It does mean punishment should be avoided if the dog does not clearly understand what he is being punished for. In case of any doubt he should be given the benefit of that doubt. With-hold any physical punishment until you know beyond doubt that an infraction of known rules has been deliberate. If it has, he will understand it—may even expect it—and he'll find out he can't get-away with misbehavior. That's some thing it is important for him to realize. So, in such case, you've just got it to do. Even so, if you've done your part well in "reaching" him, you may be suprised how seldom physical punishment is called for—in many cases it will be punishment enough to make him aware of



your disapproval. He wants to please you; and it can often be sufficient punishment to let him know that he hasn't. You don't believe it? Well, in that case I can't help you. But if you don't find what I've said correct, I'll still say the chances are greater that you've slipped—than that the dog has.

Even so, you'll never hear me say that a dog should never be punished. I do say it should never be allowed to become a constant thing. How avoid that? By making any needed punishment severe enough to register. One hard punishment is infinitely better than ten mild ones. Having to be constantly "needling" a dog can soon become but a bad habit. When you must punish make it *count*—then quit. Let him know there is no carryover of hard feelings.

One of the most interesting phases of dog development comes when you breed your own. You will be amazed by the many inherited traits. I have bred several generations of two I have now. I have often been able to anticipate likely response, based upon how their sire, dam, or grandparents have reacted in similar circumstances. This pair has inherited—not an immediate exact understanding of commands I used with their parents—but a very definite *tendency* to react far more readily than would be the case had I not been so intimate with the "blood" behind them.

First and foremost, I "reached" them when they were young. All through their lives we have been so close in our relations, both at home and afield, that response has often been almost intuitive to what I've wanted them to do. When first introduced to the house, I never taught them to "lie down" by customary methods. I just told them to do so—and they did! Today, my wife and I talk to them much as if they were children. "Go up to your bed," we will say—and they do. There is mighty little they don't understand!

The female of this pair tries harder to *talk* than any canine I have ever known. And she very nearly does just that. Her daily "conversations" with my wife are really something to hear. I may have known a few dogs to respond almost as well; but none that has tried to enter-into-the-conversation as this one does.

Canine intelligence has always been especially fascinating to me; and I could relate examples beyond space to tell them. Some scientists would have us believe dogs have no capability beyond the limitations of instinct. BOSH! I *know* better. I've seen the evidence—and with my own eyes—many times.

The last Setter to win the National Championship (in 1946) was Mississippi Zev, a dog on which I always was "high." In fact, he won four Championship titles in one year. His breeder, trainer and handler was Earl Bufkin of Mississippi. One day, some time after the dog had been retired, I was visiting with Earl in the yard at his home, and Zev was standing with us. Pretty soon the dog slipped away into the adjoining field. I wondered if he might not be heading on a self-hunting expedition. But before I could put a question, Zev stopped and looked back. Reading my thoughts, Earl smiled and said simply:

"He knows you like him, and thinks you might like to see him *point* again. He's just showing-off, but wants to be sure you're looking."

Well, I was looking but knew there was no game close-by. Yet Zev began drawing, and soon came to stanch point with head high. After a short pose he slowly turned his head to look back. Assured that he was being watched, he took a few steps and flushed a meadow lark. Then he came trotting back to join us—mission accomplished. He was in my eyes—as in Earl's—"still Champion." He knew it—and so did we.

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PENNSYLVANIA GAME NEWS

NOVEMBER, 1958

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THE STORY BEHIND THE COVER

FOR a bird as big, as slow, and as conspicuous as a ringneck pheasant, there might appear to be no chance against modern arms and ammunition. Certainly no other game bird is as relentlessly pursued each November. The roll of gunfire across the autumnal landscape on opening day makes

many of the major battles in recent wars seem quiet by comparison.

But as our cover hunter is finding out—and as every—veteran small game hunter knows, hitting this big, gaudy target is not as easy as it looks. Ringneck roosters, after the first few hours of the hunting season, learn all the tricks of the survival trade. Most of them join the track team. They quickly learn their best defense is on foot, running low to the ground and with surprising speed. If they simply must head for the wild blue yonder, like the startled cockbird on the cover, they can always wait until their pursuer is one step beyond and then scare the wits out of him by flushing behind. This little maneuver is bound to come as a severe jolt to the human nervous system, especially if accompanied by the characteristic cackle. To some novice nimrods, in fact, such pheasant chatter closely resembles the chortle of derision.

Pheasant hunting in Pennsylvania is a favorite pastime of almost every sportsman. Even the most avid grouse and turkey hunters usually yield to temptation and test their skill against the “dumb” Asiatic import. But even though this colorful game bird bears the brunt of the hunting pressure, he manages to survive and insure another crop the next year. Biologists figure the species can be maintained even if the harvest approaches 90 percent of the cockbirds (which it probably never does except in localized areas). For as already pointed out, ringnecks seem to get smart fast after the guns begin to go boom.

Fact is, the ringneck pheasant was never really a dumb bird. He knows all about cover and concealment, he has to be forced into the air where he is most vulnerable, and most of all he seems to take great pleasure in making fools of rusty shooters, who blast over or under, ahead or behind. Given good cover—a thick, brushy bottomland or a large cornfield or a big brushpile—and chances are more than even that you'll never find him. And for every unlucky bird that gets caught by accident in the opening day crossfire, there's bound to be another hiding somewhere waiting for the mighty hunters to go home. He runs, he waits, and when all else fails, he takes to the air with the greatest of ease but with all the angles figured out in his favor.

Take Ned Smith's cover painting this month for example. Easy shot? Big, slow target? Sure! But we bet he misses and that ringneck rooster will be back on some future cover again.

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Commonwealth of Pennsylvania

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PENNSYLVANIA GAME NEWS

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NOVEMBER, 1958

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Editorial . . .

Hunting's Biggest Bargain

IT has often been said that Pennsylvania offers the sportsman a great diversity of game—perhaps the widest variety to be found in any state. The wonder of it is that this highly industrialized, populous Commonwealth—which is not big compared to other states—produces large populations of game and furbearers, year after year, while entertaining probably the most hunters per square mile of any of the states. The number of the combined hunting-trapping licenses sold in the year ending August 31, 1958 (970,517) exceeded by 32,453 the number (938,064) sold during the previous year. This figure alone emphasizes the fact that more and more people are going outdoors for the enjoyments nature offers, and many of them are going hunting.

A Pennsylvania resident license costs \$3.15. It entitles the owner this year to take: one wild turkey; 8 ruffed grouse; 30 squirrels; 8 male ringneck pheasants; 20 cottontail rabbits; 12 bobwhite quail; 6 snowshoe rabbits; an unlimited number of raccoons and woodchucks; one deer and one black bear. With the license, you are also entitled to trap and may take five beavers plus an unlimited number of minks, muskrats, skunks and opossums. The same license also permits you to hunt migratory game birds—woodcock, mourning doves, sora, rails, gallinules, jacksnipe, ducks and geese. Of course, very few, if any, hunters accumulate all this game and fur in one year, but the low-price license gives the legal authority to do so.

The increase in numbers of hunters and the hours they spend afield points up the problem the Game Commission faces in providing adequate wildlife populations. Large game crops must be produced while industry, new highways, home building and other developments year by year close thousands more acres to the shooting pastime. This shrinkage of open hunting territory requires research and sound, over-all wildlife management to the end that the available acreage will produce larger populations of game to compensate for the loss.



Assignment Trackdown

By Gene Coleman

IT was cold and clear with an early, light snow glistening like sugar frosting on the forest floor and the silence was disturbed only by the forlorn rattle of an occasional browned leaf as it tumbled toward its Winter limbo below.

The time was Monday, November 21, 1955. It was a few moments before 1:15 P.M. and the four-man hunting party pushed wearily through the thickly wooded fastness of State Game Lands 91, a sprawling wilderness of about 10,000 acres almost half way between Scranton and Wilkes-Barre. The four men had been on the move since about dawn and ever watchful for any sign of their target—black bear.

Slowly, the quartet took up stands in the general area of a nearby fire line and resumed their watch.

Some time later, Joseph Budzak, 23-year-old hunter from nearby Pittston, stretched his weary muscles, moved from his stand and hunkered down with his back to a fire-charred stump.

GENE COLEMAN is a news reporter for the *Scranton Times*. He was assigned to cover this story the day it happened and because of personal interest, followed the investigation as it proceeded afterward.

And thus, the stage was set for swift and tragic death!

About 100 yards away Joe's brother, Stephen, moved restlessly about his post at the edge of the fire line. Nothing had moved and the thick woods echoed his crunching steps in a hollow note.

Then, Steve began walking in Joe's direction and soon spotted his brother squatting in front of the charred stump, his shotgun on the ground nearby.


"Hey, Joe," he called out, "What time's it getting to be?"

Joseph Budzak never did find out what the time was.

As if in answer to his brother's shouted question, the vicious bark of a heavy caliber rifle shattered the woodland silence and Joe pitched forward convulsively, choking out, "Steve, I'm shot!"

Steve sprinted toward his fallen brother and in a frenzy ripped open his hunting coat. His face ashened as he stared horror-struck at the gaping wound in Joe's chest and the red, life-giving pool which tumbled down, staining the snow scarlet.

This then, was the opening chapter of another "Hunting Accident Report" to which Pennsylvania Game Commission enforcement officers may sometimes become conditioned to but never "used to."



But it was more than that, too. It was the start of a vivid chapter in the life of District Game Protector Stephen A. Kish of Moosic whose patrol area encompasses heavily hunted Lackawanna County. This is the area in the foothills of the Pocono Mountains in the belt of the anthracite sector which attracts armies of hunters not only from the Commonwealth but from New York, New Jersey and Delaware, a tough area to patrol for any man.

This then was the beginning of a stark object lesson for the uninitiated that the Game Protector must be a man of many talents, a man of determination, imagination and possessor of a bulldog intensity of purpose.

It was the start of "Assignment Trackdown" for Game Protector Kish. His job—to find the mystery rifleman who blasted the fatal shot in the back of Joseph Budzak and bring him to justice.

His sole immediate clues were meager. A spent rifle cartridge and the scrabbling prints of hunting boots in the light snow nearby where the rifleman fled.

But 45 days later they led him to the killer!

For the moment, place yourself in the position of Game Protector Kish as he takes you chronologically along with him and fellow investigators down the trail which eventually led to the mystery rifleman.

There is no point here in re-identifying the hunter who took Joseph Budzak's life in mistake for game. He has paid his legal debt to society but moreover, he must live with his own conscience. The rest of the story is a matter of official record.

As Stephen tried frenziedly to stanch the flow of blood from his brother's body, he shouted hysterically for the two other men in their party—John Vischansky and Cataldo Lamarca, also of Pittston. Stephen and Lamarca began struggling with the victim toward an old CCC road a few miles away while Vischansky began a frantic eight-mile run for help.

Plunging headlong through the woods, Vischansky discarded his heavy hunting coat and his cumbersome boots in his race, running several miles in his stocking feet.

Breathlessly, he finally stumbled, exhausted, against the door at the home of Clarence Renfer, a state forest ranger, and the emergency call for a physician and an ambulance went out.

But the ambulance and the doctor made the mad dash in vain as had Vischansky. Stephen Budzak and Lamarca were met by the would-be rescuers as they staggered vainly with the victim down a woodland trail.

Another call went out, this time the grim summons for a coroner and shortly afterward the medical examiner said the official words which explained the cause of death. Joseph Budzak had been struck in the back near the right shoulder, the bullet plowing along and tearing apart the right lung, collapsing the left lung and barely missing the heart.

Not very pretty, but what hunting accident is? Mercifully, Joseph literally never knew what had hit him.

The routine calls, as they say, went out and in answer came Game Protector Kish, a lithe, sharp-eyed former World War II bomber pilot and he was joined at the scene shortly

by Trooper Theodore A. (Spike) Kolakoski, a husky, perceptive officer of nearby Daleville State Police Substation who let little escape his practiced scrutiny.

Then, Game Protector and Trooper, working as a team began the tedious, unglamorous leg work routine of their respective professions. They started out only with their meager clues . . . the spent cartridge and the boot prints.

Sketches of the prints were made by the two but it seemed it would be an uphill road because it was the type of boot which is common in every sporting goods store and worn by hundreds of hunters who prowl the big game lands near Bear Lake in Lehigh Township. The prints did tell a story, however. Leading into the death site they told the story of the stalking hunter, his steps carefully placed about two feet apart from the point where he entered the brush from the old CCC road.

But those leading out painted the sign of a man seized by fear and hysteria as he pumped frantic legs away from the scene he wanted to erase forever from his mind.

Game Protector Kish and Trooper Kolakoski traced the line of fire from the point where the fired hull was found near the foot prints to the spot where Joseph Budzak sat, unknowingly awaiting death. They measured the distance . . . 173 feet, NOT YARDS. Fifty-seven feet from where the victim had been hit they found where the heavy slug grazed a sassafras tree on its deadly flight.

Then began the tireless, searching questioning of scores of hunters in the immediate area. Cars were stopped, hunters and their weapons checked and then, more questions.

Out of the welter of questions and more questions came descriptions of many hunters and many cars spotted near the scene the day of the killing. License numbers were jotted down, vehicle descriptions noted and

checked. The list of potential suspects grew and grew.

But slowly, one car began to figure in the noted descriptions more prominently . . . a two-tone Buick sedan. It had been spotted stuck on a nearby road at one point, seen on another bordering road and soon the field was narrowed down by Game Protector Kish and his trooper team mate.

The two men continued their leg work and seemingly endless line of questioning of those who had been in the area. Then, they were sure they knew the identity of the mystery rifleman. Their problem now was to uncover the necessary evidence which would establish the offender beyond the shadow of a legal doubt as the man who had fired the fatal shot.

It was the last day of the year 1955—December 31—when Game Protector Kish and Trooper Kolakoski arrived at the home of their target. Ironically, he came from the same community as his victim and knew him.

Here, the two men played their trump card, hoping for a psychological assist. "We know all about it," Game Protector Kish said as they faced the offender. "Do you want to tell us what happened?" They told the rifleman they had all the evidence they needed to place him at the scene as the one who fired the death shot.

To their astonishment the offender seemed relieved and readily poured out his story. He said he was glad they finally caught up to him. His conscience had been eating away at him all these weeks.

Suddenly, Game Protector Kish and Trooper Kolakoski became aware they had played their trump card at the right moment.

The man showed them the death gun, a 300 Savage rifle. The firing pin had been filed and the weapon otherwise altered so that the casing



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found at the death scene could not be matched to it.

And the boots which let the tell-tale trail? They were nowhere to be found but were later discovered secreted at a relative's property.

And then in swift succession came the technicalities involved in such cases. The offender was returned to the scene of the tragedy and re-enacted his movements. Then came his arraignment on the charge of shooting a human by mistake. Two months later he pleaded guilty to the charge in Lackawanna County Court as five sisters and four brothers of Joseph Budzak, his victim, stood by, watching.

The offender's wife and his two tiny daughters also were in court, a tragic trio as they watched the proceedings with tear-filled eyes. Tragedy has many faces in hunting accidents.

Facing a possible jail sentence of from two to five years and/or a fine of from \$500 to \$1,000, the defendant came before Judge Michael J. Eagen on March 9, 1956, for sentencing.

He was ordered committed to the county jail for 15 months and directed to pay \$1,000 to the estate of the slain hunter and also denied the right to hunt and trap within the Commonwealth for 10 years.

Ironically, he served less than a month and was paroled.

During the court proceedings a bitter note of irony was injected when the defendant told how about a half hour before the fatal shooting he had spotted a bear but waited "too long" and failed to get a shot at the target. It was while making his way out of the game lands, he said, that he spotted a dark object and thought to himself, "That must be the bear I just saw."

"The object moved just a hair and it looked like a bear looking down at me," he told Game Protector Kish and Trooper Kolakoski in his

formal statement. "It was the same shape as a bear. I was going to shoot and then held back. This was before the object moved.

"When it flinched a little bit," he went on, "I squatted carefully and fired. After firing, I walked a couple of steps forward and heard someone shouting. I didn't hear what they were shouting," he went on.

"I wasn't certain that I shot him (Budzak) but I thought I had shot someone. I got hysterical and started running. I came out to the road and saw an ambulance coming. I was sure then I had shot someone," the mystery rifleman pleaded.

The offender told Game Protector Kish and Trooper Kolakoski that the dark color of Budzak's hunting coat plus the burned stump in front of which he was sitting led him to believe it was a bear. The two officers confirmed that the victim had been wearing a black and red plaid coat.

Counsel for the offender asked the court for mercy, contending that the "terror of what had happened—his fright—robbed him of his normal senses. All that was left was an animal instinct to run."

Game Protector Kish and Trooper Kolakoski left the courtroom after sentence was passed. Their methodical, thankless job had been well done.

"Looking back on it now," Game Protector Kish said later, "it sure wasn't much to go on. But it serves as a deadly lesson which should always remain fresh in the minds of sportsmen as they sight down a gun barrel.

Before you squeeze that trigger . . . will you become the target of some Game Protector's ASSIGNMENT: TRACKDOWN? or even worse, maybe the target of another mystery rifleman?

Take another look through those sights!

Pennsylvania's Professor of Game Management . . .



Dr. P. F. English
1894-1958

By Alvin R. Grove, Jr.

THE death in mid-October of Dr. P. F. English, Professor of Wildlife Management at The Pennsylvania State University, struck a hard

blow at the future of game management both here and in many other parts of the United States.

Doc, as he was affectionately known

by hundreds of students and friends, influenced more men in their thinking relative to the proper management of our game species than can ever be estimated.

It is truly impossible to measure the influence of a single man who has, at his command, the opportunity to train those who direct the thinking and philosophy of others and who carry their work into the four corners of our country. The behavior of Doc's students will influence game management profoundly for many years to come.

We are indeed fortunate that a man as solid and honest as P. F. English devoted tireless hours to the proper training of many of those to whom we have entrusted the future of our sport.

Dr. English was a relatively young man but he worked hard. This continual strain and Doc's inability to remain idle, if only for a moment, took their toll. Nothing was too much trouble if it were for the good of the cause.

In addition to being devoted to his job and his students, he also found time to serve as a director for the local sportsmen's club. He took the time to attend, as a delegate, the meetings of the Centre County Federation of Sportsmen's Clubs and, during the past year, served as advisor to the game committee of the Pennsylvania Federation of Sportsmen's Clubs.

Dr. English came to Penn State in 1938 but we did not meet him until after our return at the end of World War II. Our first encounter was at a sportsmen's meeting on the second floor of the American Legion Hall and the topic under discussion was the deer problem. It would seem that there has almost always been a deer problem and Doc was constantly thinking about how it influenced the hunters of the State.

As late as June of this year, we had the pleasure of reading and making

some suggestions on an outline of proposed deer research in which Doc and others were interested. We no longer recall what we might have said, and it matters little, but a note from Doc had this to say: "Re: project 1057 revised. My idea is that first we must get the deer herd down to the carrying capacity of the present habitat; then try making cuttings, etc. We may be able to build up the environment to support an increasing herd of deer."

There can be little argument with the fundamental concept that the range must be able to support the deer. If there are too many deer for too little feed, an effort must be made to bring them into balance. What we especially like about Doc's philosophy is that while he was ready to concede that the number of deer might have to be reduced to match the food supply, he was also thinking in terms of improving the habitat so a larger herd could be restored. Too many of us would probably think of reducing the herd to match the environmental conditions but not enough about the future increase in terms of improved food.

Dr. English was born in 1894 at Farmington in the state of Washington. His parents were immigrants to this country. His father came to America from Vienna, Austria, at the age of 17 and his mother from Bavaria, Germany, at the age of 15.

The early education of Doc took place in Oregon where, in 1911, he was graduated from the Grant School and, in 1915, completed the scientific course at the Salem High School at Salem, Oregon. His major study was animal husbandry at Oregon State Agricultural College and, in 1919, he received his Bachelor of Science degree and moved directly into graduate study in zoology.

After two years, he moved to Texas A. and M. to continue his studies in physiology and entomology and received a Master of Science degree in

1925. His research was published in the *Journal of Mammalogy* in 1923. Additional graduate study at the University of Chicago, Ohio State University, and the University of Michigan resulted in his being granted the Ph.D. degree in February of 1934. The title of his doctoral dissertation was "Cause of Pheasant Mortality in Michigan," several parts of which have been published.

The mere recitation of the formal education of a man may be of little consequence but a rather continuous education lasting from 1903 to 1934, a span of 31 years, cannot be totally ignored. From the record, it is obvious that Doc's interests were broad. His training in zoology, entomology, physiology, and forestry provided a solid background for the future work and obviously played an important part in the kind of advice passed along to younger men who are directing the management of our game.

The positions held by P. F. English are in themselves a reflection of his abilities and energy. Even before Doc arrived in Pennsylvania in 1938, he had served as instructor, assistant professor and associate professor at Oregon State Agricultural College, Agricultural and Mechanical College of Texas, the University of Michigan, and Connecticut State College in such diverse areas as zoology, botany, biology, forestry and wildlife management.

In 1938, Dr. English was appointed assistant professor of Wildlife Management at The Pennsylvania State University and in only seven years reached the position of professor. From September 1951 until July 1953, he served as acting head of the Department of Zoology and Entomology.

He held a variety of positions in the Wildlife Society and was a charter member of the group. From 1942 until recently, he served the organization in various official capacities as president, secretary and as chairman of numerous committees, including

the membership, nominating reorganization and especially the archives committee where he performed a most notable job in 1952 and 1953.

Much could be written about the honors that Doc received during the many years he contributed actively to the field of game management. A brief list of some of the honor groups of which he was a member includes The American Association for the Advancement of Science, The Society of Mammalogy, Phi Sigma (honorary biological fraternity), Sigma Xi (honorary scientific), Gamma Sigma Delta (honorary agriculture) and others.

Dr. English followed Dr. J. Logan Bennett as leader of the Cooperative Wildlife Research Unit on the University Campus. Characteristic of his endless vitality and willingness to sacrifice his own time for the benefit of others, Doc cut short a leave of absence granted to him in 1947-1948 to return to State College and take over the leadership of the present unit when Dr. Bennett was moved to Washington, D. C., to assume other duties.

Last month, Steve Liscinsky told about Doc's last hunt for woodcock. They were hunting in Bald Eagle Valley, only a few miles from State College, and it was one of those rare days when all the birds flushed toward the high side where Doc was walking. He had many shots and the day ended with four of those elusive birds being tucked away in the game pocket of Doc's hunting coat. His remark in essence was that if this is my last woodcock hunt, I am happy to have it be this way.

We are certain that Doc had no serious thought that it might be his last hunt but in the spirit of his way of life, he was ready to settle, if that was the way it had to be, for the pleasure he had had in a day afield with good friends and hunting companions.

A Sense of Direction

By Larry Stotz

A BOW and arrow hunter with a bright red "whistle punk" hat and a checkered hunting shirt damp with sweat picked his way through the dry leaves that covered the flat, rocky ground of the plateau.

A startled grouse exploded into flight under his feet when he crashed into a windfall of blowdown timber. He recoiled in surprise, lost his balance on a log that caught him behind the knees, and fell backwards. After he picked himself up, he searched for the arrows that had spilled from his quiver. Satisfied that he had found them all, and confident that he would find something to shoot, he struck out again cross country.

Wind blown rain clouds were closing in from the north. He looked up anxiously at the sullen sky, and impatiently brushed aside a bright red maple leaf that clung to his neck.

"Funny how quickly it can turn cold," he thought. "Wish now I'd brought along a jacket."

He stopped and lit a cigarette. After a deep drag he looked at his watch.

"I'll hunt another hour and then head back to the highway," he decided.

A movement behind a clump of mountain laurel alerted him. A small buck was feeding on the twigs of a tree that had toppled over in a recent storm. With feet wide apart, the hunter brought the bow to full draw. The arrow soared straight and true. But just at the last instant, an unseen twig on the downed tree de-



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flected it from the mark. One quick snort, a mighty leap and the buck was gone. The weary hunter started searching for his arrow in the brush and leaf litter. Before he was through, a light drizzle was falling and the October leaves looked colorless under leaden skies.

"If I'm going to make it to the highway before dark, I've got to step on it," he said aloud. "That wasn't such a good idea leaving the other fellows. Hope they get back to the car all right."

He struck out blindly across the plateau in a race with darkness. He had always bragged about his sense of direction, but now put to the test, without compass or sun to guide him, he walked in a great circle. The hunter was back where he had started, when he had hurled an arrow at the buck, but he didn't know it. A circle has neither beginning nor end, and the plateau became an endless circle that cut him off from the outside world. No stream, no gully, no slight rise in the ground broke the monotony of this forested table land.

Darkness would soon set in, and a night in the open seemed inevitable. A great, shaggy hemlock that had been savagely clawed by lightning offered shelter beneath its dense green boughs. When the hunter had broken off the dry dead stubs of the lower branches, he dragged enough blight killed chestnut logs over to the tree to keep a good fire burning all night. A chill wind sent a shiver through him as he stood over the fire in clothes damp from sweat and the fine drizzle.

Black storm clouds smothered the morning sun. The hunter who slept by the dying camp fire was half covered with red and yellow leaves that had dropped silently in the night. When he woke up, he struggled awkwardly to his feet, tossed some twigs on the hot coals, and fanned them into flame with his bat-

tered hat. His first impulse was to sit it out under the shelter of the hemlock and wait until a search party found him, but he wouldn't admit to himself that he was lost. He struggled between pride and common sense, and pride won.

Daylight was fading when he stumbled onto a spring. Pride no longer walked with him, and he threw himself face down and lapped up the water like a famished beast. When he rose, he wiped the mud from his shirt with the back of his hand. The night was spent in intermittent sleep under a huge overhanging rock.

Two days and nights of exposure without food or shelter had taken their toll. The lost hunter had dark circles under his eyes, and a black stubble of a beard made him look older than his years. His socks were full of holes, and his feet were blistered where the loose fitting boots had rubbed.

A racket behind the big rock that sheltered him brought him out of his stupor. Cautiously he worked his way around the outcropping and came to a small opening in the forest where an apple tree had sprung up from a core tossed aside by some forgotten lumberjack. Two black bears were picking apples from the top of the tree. The crackling noise he had heard was repeated when a limb broke under the weight of one of the beasts. Their little pig eyes had not caught sight of him, but now they smelled him. They tumbled out of the tree and waddled off into the timber. Satisfied that they would not return, the hunter gathered the wormy, wizened-up apples that covered the ground. He filled his empty belly with them, and then drank great draughts of water from the spring.

It was the morning of the third day, and loneliness, bewilderment and exposure had trampled him under foot.



Was that a shot or was it just his imagination? The hunter listened, his heart beating wildly. Two more shots rang out, and then he was sure. He stood up and shouted until his throat was raw, and he could no longer cry out. Again he heard three shots, but now they were far away.

He was slumped against a log by the campfire when he heard voices in the distance. At first he thought it was only the wind in the trees, but now he was certain that help was near. He tried to shout, but the voice that he had squandered earlier had not returned. The hoarse animal cry that came from his lips could only be heard at close range, and the search party had already turned back toward the highway.

It was late afternoon before he again heard the faint sound of shouting. Now they were on the other side of him and that left a wide gap in the search area. He ran in the direction of the voices, but heard them no more, for the searchers had turned back. Exhausted, he staggered back to the fire and dropped to the ground with all hope of rescue gone.

On the morning of the fourth day, two men stumbled upon the lost hunter. He was sleeping beside a camp fire that had gone out. One of the men shook him gently. He opened his eyes and stared unbelievably at

the faces of the two hunters bending over him. When he realized that he was not dreaming, he got to his feet and a torrent of words escaped from his lips.

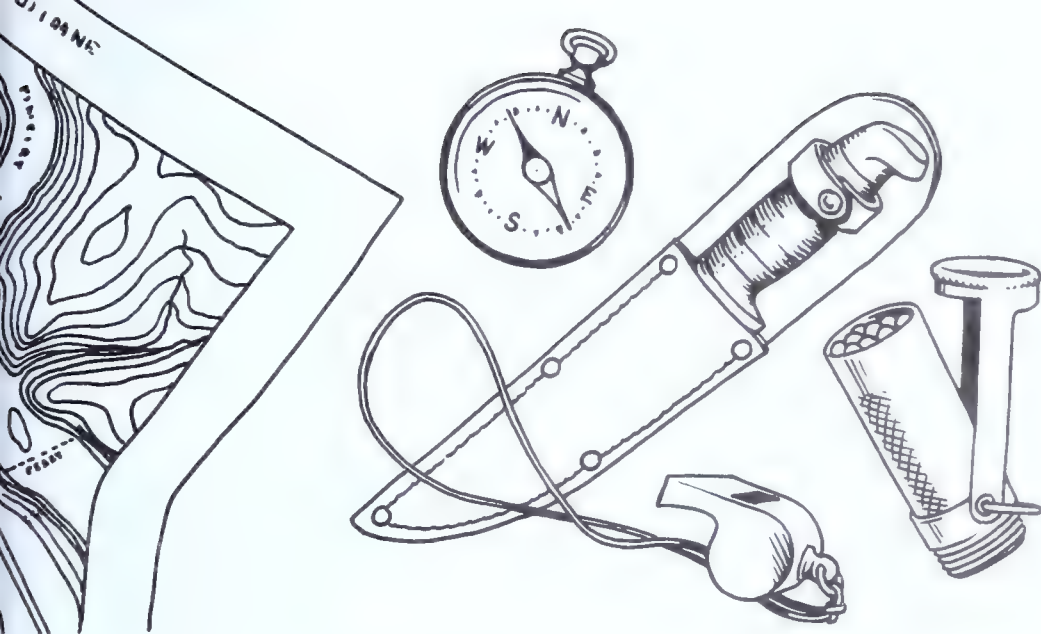
"I thought I was finished," he cried. "I gave up all hope when the search party turned back yesterday. I was too weak and discouraged to strike out again on my own. It's a terrible thing to be lost—a terrible thing."

All of the things that our imaginary hunter did wrong have been repeated over and over again by hunters, and as a result they have become lost in the woods, and search parties have had to be organized to get them out safely.

The worst mistake that any hunter can make is to assume that he has an infallible sense of direction. There is no such thing, for no man's sense of direction is perfect.

When a hunter has complete faith in his sense of direction, he is apt to feel that a compass is just excess baggage, and so does not carry one. This is stretching his luck too far, especially if he finds himself on unfamiliar ground on a cloudy day where there are no landmarks for a guide.

It hardly seems possible that a hunter would ever forget that water runs down hill, and that the run-off from a spring can point the way to a brook that will in turn lead to a river,



a highway and people. But a lost and bewildered hunter cannot always think clearly. He forgets that there is no surer path, to lead him out of the woods, than the channel that running water has cut.

When a hunter leaves his companions so that he can have the woods to himself, he is inviting trouble. Unless he has told them where he intends to hunt, and when to expect him back, they can be of little value in aiding a search party to find him if he gets lost.

There would be fewer lost hunters if each would take along a good map of the territory he intends to hunt, and learn how to use it. A man who is skilled in reading a topographic map, and knows how to use a compass to orient it, need not worry about getting lost.

A police whistle weighs only an ounce or two. Hung on a string around the neck it can offer that ounce of prevention that is worth a pound of cure. There is no more helpless feeling that a lost hunter can experience than to have shot his last cartridge, and have yelled himself hoarse before a search party has come within hearing distance of him. A man can blow on a whistle when he is too weak to shout. This piercing sound may enable a search party to locate him.

When the realization that he is lost comes over a man for the first time, he can easily panic. Equally disastrous, though, is for him to refuse to admit to himself that he is lost. Either can only result in energy wasted walking in great circles, and in befuddled thinking when a clear head is essential. It takes self control of the highest order to sit down and calmly think things over, but many a lost hunter has gotten his bearings again this way and walked safely out of the woods.

Hunting a lost man can be like hunting a needle in a haystack, but if he keeps moving the task becomes even more difficult. The best advice to a hunter who realizes that he is hopelessly lost is to stay put, preferably where there is natural shelter such as an overhanging rock outcropping. He should build a good fire, and keep it burning. Green hemlock boughs added to the flames from time to time will throw up black smoke which can be picked up from a plane or a lookout tower.

An organized search for a lost hunter often involves several hundred men, portable radios, emergency manning of lookout towers, and the use of jeeps, bloodhounds and planes.

A haphazard, unorganized search has no assurance of success. Only one carefully planned and well organized is worth the effort. The age, physical

condition and hunting habits of the victim should be determined. A complete description of him, including his manner of dress, should also be obtained. Reliable information on where he was last seen is important in deciding where to concentrate the search effort.

The searchers have to assume that the lost man is no longer on his feet, and is unable to communicate with them in any way. He may be unconscious, badly hurt or even dead. An unconscious man is not easily seen if he lies crumpled in a pit left by an ancient uprooted tree, or beside a big log. For this reason, the searchers have to be spaced at close intervals to inspect in a strip all of the ground they cover.

Units of twenty men make good search crews. With a leader on each

end to keep alignment, and a box compass to keep the crew on the right bearing, the strip assigned to them is completely covered. At intervals, the searchers stop to count off, and stragglers are allowed to catch up. The crew is then realigned, and the slow march continued. When the crew reaches the end of its strip, it pivots around the leader and returns on an adjacent strip.

There is nothing more disheartening than to search for hours for a lost hunter who long ago has found his way out, but has failed to report that he is safe.

There is nothing more heartening, though, than to find the lost man waiting patiently by a fire for the help that his faith in his fellow sportsmen told him would not be long in coming.

TREES FOR TEDDY

American schoolchildren are being urged to plant trees during 1958 to commemorate the 100th year of the birth of Theodore Roosevelt. The recommendation, by the Theodore Roosevelt Centennial Committee of the Natural Resources Council of America, urges public school superintendents, principals, and teachers to observe the memory of the great conservation leader in that manner, according to the Wildlife Management Institute.

"There could be no more fitting tribute to this pioneer conservationist during the centennial year of his birth than a program symbolizing the former President's varied personal interests in natural resources, forestry, wildlife, and youth," the committee said.

"We feel that tree-planting activities, with appropriate ceremonies, would serve the dual purpose of inspiring the young people of America with the spirit and philosophy of Theodore Roosevelt. It was under his administration that the first fully effective laws were enacted to protect our natural resources.

"Tree planting in the fall, up to the first hard freeze in the northern States, can be as successful as in the spring. Everyone retains memories of tree-planting projects, and it is hoped that there will be widespread participation in this phase of the Theodore Roosevelt Centennial program."

1958 Conservation Directory Available

The 1958 Conservation Directory, a listing of international, national regional, and State organizations and officials concerned with the protection of wildlife and other natural resources, now is available from the National Wildlife Federation, 232 Carroll Street, N. W., Washington 12, D. C., at 50 cents a copy.



The Hunters Who were Not Asked Back

By Bob Bowers

WHEN I was growing up, a group of us boys made it an annual fiasco to ask a particular farmer if we could have the surplus apples left after the harvest. The owner always refused our request, and we always sneaked into the orchard and took them anyhow, but we felt better for having asked. That sounds pretty childish, I admit, but it would appear that some adult hunters actually think that way today.

The great "cure all" for our hunter-farmer relationships today seems aimed in the direction of

merely asking the landowner's permission to hunt. Seventy-six per cent of the farmers in Iowa who control 97 per cent of the hunting grounds said "It's okey to hunt, but ask me first." Five per cent said, "Absolutely no hunting on my place." This business of just asking seems the path of least resistance to more hunting areas for all sportsmen, but is it really?

Of course we should ask. That fact is so basic to our laws of trespass and human ownership rights that it is almost trite to repeat it. Asking permission to hunt on another man's lands is or should be a moral commitment on the hunter's part to abide by every unwritten word in the hunter's code of ethics.

What some of us often fail to understand is that while farmers want to be asked, they don't require it just to satisfy a mere whim. They want to see who is on their land and

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All Photos Courtesy Pa. State University.

SAFETY ZONE VIOLATION—shooting within 150 yards of occupied buildings or barns—is a sure-fire way to antagonize landowners as well as subjecting yourself to severe penalty.

to know something about these people. They want the opportunity to say “no” if those requesting permission to hunt cannot stand personal appraisal. And many of these landowners have certain instructions which must be adhered to by all who accept the privilege of hunting. Maybe they have pet whims, like the guy who told me I could hunt rabbits but “don’t shoot the quail.” Or the fellow who said, “Yep, you can hunt, but my wife is sick now so do your hunting in the woods across the road.” How is a man to know whether “the wife is sick” or “don’t shoot my quail,” if he doesn’t meet the man on whose land he is hunting?

Even after one has gone to the “bother” of asking hunting privileges, there is a certain moral obligation to uphold the law and to use all due caution to protect other hunters, the landowners possessions and his property.

I remember one time asking a landowner if I could hunt his acreage for rabbits and quail, but he explained that he was very sorry to refuse. He said that 25 hunters were already on his property and that he thought that was enough. So did I. But as I started walking down the road looking for another area that might be open to hunting, I spotted a few of the 25 hunters mentioned by the farmer. As three of the group topped the hill in front of me, a large flock of ringneck pheasants jumped up and scattered in all directions. But as they flew a barrage of shotguns broke loose in their direction and four birds, young ones, old ones, cocks and hens, tumbled to the ground. Each of the three men paid fines for those birds. But that did not sooth the farmer’s feelings who owned the bramble field and who had granted that group the right to hunt it. One week later each fence post was decked out in a brand new

"Posted" sign, with the specific clause at the bottom, "No Permission to Hunt Will Be Granted." I often wondered how many sportsmen, who didn't know the circumstances, drove by those signs and passed judgment upon the man who put them there.

My total land ownership is a plot of ground 188 feet long and 60 feet wide. The lower end of it is planted in white pine seedlings which barely protrude above the ground. Yet, I resent a stranger nonchalantly ambling across my land, because he could not help but trample my trees. If he would ask me to cross the back lawn first, I could not find it in myself to refuse him permission. At least, however, his asking would give me the chance to caution him about my seedlings. I'm certain that the average person who walks over those pines wouldn't even suspect that he is trampling a future Christmas tree crop.

My ownership is small and mostly a decorative pastime with me. When I back up and put myself in the land-

owner's place whose very livelihood depends upon his productive lands, it is unthinkable that anyone would hunt across his crops and fields without his permission to do so.

Personally, I appreciate knowing the whims of the man who owns the land upon which I tread. I want to know his dos and don'ts. And every-time I see a stranger across the field, I don't want to have to duck out of sight in fear it may be the man on whose land I'm trespassing. We grant a hotel manager the courtesy of asking for a room—we don't just plunk down the cash and walk in. So how is the landowner different, except that he gains nothing from our being there. Hunting is his liability, not his business.

After reading the reports on some hunter's actions, following the opening of both large and small game seasons, a person sometimes wonders how any of our private lands are still open to public shooting.

Take the incident which took place

NO TRESPASS NOTICE is a trademark caused by careless, greedy, and rude hunters. A small minority of hunters each year seem to forget that courtesy and respect are basic necessities in outdoor sport.



a couple of seasons ago. A group of hunters who were many miles from home shot a deer by a farmer's house. The farmer had seen the animal and had shot at it also. Both parties claimed the deer. Strength in numbers, however, prevailed. The hunters forcibly entered the posted land, took the buck from the farmer and left. The posted signs are even more profusely tacked up now.

And in one county a deer hunter's complete lack of respect for another's property just about cost the landowner a farm house and the hunter his own life. In this particular area, hunters found only a few places to spend the night. On the week-end before the season on deer opened, hunters were camped in sleeping bags, in fields and woods, cars and trucks, and in old barns and other outbuildings. As darkness fell on the area, two men spotted an old, vacant house in flames. Rushing to the scene, they found the floor around the fireplace in flames. On the floor besides the fireplace was the villain who had started the blaze sleeping peaceably. After carrying water to douse the fire, the two men again checked the sleeping hunter, who obviously had overindulged in alcohol, but he wouldn't or couldn't move from his slumber. The good samaritans left him still dreaming of high-powered rifles and fleeing deer.

While the problem of hunting and fishing areas is one of national scope, it will never be settled on a national or statewide scale. Game commissions the nation-over will provide public hunting grounds to the full extent of their abilities, but when the bulk of our lands are privately owned, the problem reverts back to dealing with the man who owns the land. The sportsman must deal with him, individually, not only in groups. It is now and will continue to be a problem between the individual and the farmer. If a man is to hunt upon private lands he must convince land-

owners that he is trustworthy enough to rate the privilege.

However, present day hunters are paying for the mistakes of those they followed, their dads and grandads. In the past years the emphasis has not been upon doing anything to appease the landowner, and as much as we try today we cannot quickly overcome the resentment which has been established. It is here that the organized sportsmen can do something as a group which will help re-establish faith in hunting as an honorable pastime.

Regardless of how it is put, the who problem of farmer-sportsman relationships comes down to, "how can the landowner be compensated for his annual harassment by hunters?" This is a fair and reasonable question. It must be answered and in part it can be by organized thinking and action.

It used to be that a hunter traveled a few miles away from home to hunt, usually staying with a local resident and eating his meals there. During his trip he filled his gas tank at the local service station and ate at the local restaurants. He bought eggs and frying chickens to take home with him and perhaps left a gift or two with the farmer's children.

The feeling between hunter and farmer was a good one; it was friendly and both talked about "next season" or even about the coming fishing season and the possibility of arranging for a friend to room and board. Maybe the friend would stay with a neighbor, but still he was welcome in the community because the community profited by his presence.

The direct effect of these annual sorties into the deer country was that "old friends met" each year. The hunter had a place to stay and paid for it as he should have. In return the farmer allowed him to hunt his lands and sold some farm products. Even the community grocer, bank, service station and other businesses profited directly or indirectly. Best of



LITTERBUG AND CARELESS SMOKER is never welcome anywhere. There is no room in hunting for the thoughtless nimrod. He not only spoils his own recreational opportunity—he ruins it for everyone else.

all, the two factions met on a friendly basis and looked forward to it.

This friendly feeling is no longer present, or at least it is not as widespread in the deer country. The deer are still there and so are the farmers. And the sportsmen still come to hunt each fall in growing numbers. The trouble is, expenditures by sportsmen did not keep up with the increased numbers. Abuse of land and property by those who hunted indiscriminately climbed and pretty soon land began to be posted.

Hunters apparently continued to feel that they liked to hunt "favorite haunts," but it was cheaper to camp out or stay at their own lodging. They loaded the car with groceries from a super market in Pittsburgh, and filled the tank with gas before they left, returning half way home before filling up again. This was the "easy way" and hunters took it. This was not an intentional act against farmer or community, but it played

havoc with the relationships between the two groups. No longer did the local service station make his extra profit from the deer hunters; no longer did the local store sell extra groceries. And the farmer's "home cooking" went uneaten except by himself. The hordes of hunters trampled his fences and row crops, and the landowner received nothing in return but heartaches and headaches. And resentment grew—it mushroomed. And it's a good bet that everyone of us who criticizes these farmers' actions would have the same stand as they did, were the shoe on the other foot.

The conservation workers do not have all the answers to any problem facing us today. We do know that farmers and sportsmen are real human folks. They are generous and considerate and like to be friends. Anytime we make a friend of a landowner, we scored a hit in the game of "hunter-sportsman" relationships.



NED SMITH

Pennsylvania Woodcock Shooting Of 110 Years Ago

CONDENSED FROM JOHN KRIDER AND H. MILNOR KLAPP

By Herm David

Part II

WOODCOCK shooting in the immediate vicinity of Philadelphia, like snipe shooting, has declined within a few years and from similar causes, but not to the same extent. Great numbers of birds are still shot in months of June and July along the banks of the Delaware, by those who pursue this sport for pleasure or profit.

It is quite a frequent occurrence in favorable seasons, for two or three good shots to kill from twenty to thirty cocks before nine o'clock in the morning, between the Navy-yard and the mouth of the Schuylkill, a distance of five miles. In fact, to enjoy this kind of shooting at all, you must be up and off long before sunrise, so as to be on the ground and have your sport over before the heat of the day. If the weather has been dry for some time previous, you may be certain of finding birds in "the cripples," that is if your purpose has not been forestalled by some detachment of bank-shooters, who would appear to have slept on their arms under the trees in some adjoining meadow, so as to commence the action as soon as it is light enough to shoot.

The vociferous clamor and continued firing of the sharp-shooters, when birds are abundant, furnish no bad representation of a skirmish in the gray of dawn, while their flushed faces and constant dodging up and down the bank (often loading as they run) to keep pace with the yells of

their canine assistants and the shouts of their companions in the covert, in no wise detract from the merits of the scene. It is customary for them to go in parties of four, two of whom enter "the cripple" with three or four setter dogs, while one of the others remains on the bank, and the other takes his place on the "drift" on the outside of the cripple nearest the river.

Spaniels, by the way, are held in little esteem for this arduous sport, and they who use them select a stock much stronger and hardier than the little English cocker, which is worse than useless. The last soon fag in the heavy, encumbered fround, and after a little experience in what they expected to do, learn to skulk, or to answer their excited master's "hie on!" with shrill, helpless cries of concern, as if to intimate that they are sorry for it, but really the thing will not do. Setters, being better able to stand the work, on the contrary, take so kindly to it, that they often give tongue on every bird, and acquire a habit of flushing game, which, of course, destroys their utility as field dogs. It is seldom that even the best bred setter, if encouraged, season after season, to range and hunt out a cripple, can be depended on out of it; instances are, however, known, where dogs have seemed to comprehend exactly what was required of them, when hunting the same description of bird in different kinds of ground; and we have heard of setters, and more especially pointers,

who, in the language of the doggerel,

Would flush a woodcock in a
swamp.

And stand it in the clear.

But these instances are rare, and if you have any regard for the standing of your dog, do not suffer him to enter a cripple.

However, the bank-shooters are at their stations; the dogs dash in, and presently you hear a yell, followed by a shot, or a shout of "mark! bird up!" from within, and a report or two from the bank, or the outside, according to the direction which the bird takes. You may readily imagine what ensues, when you are told that every step in the dark cover is in deep-black mire, strewn with decaying drift-wood, and overgrown with stunted trees, reeds and thick alder bushes, and when the birds are put up rapidly, the alarm notes, firing, and yells of men and dogs increase in proportion, while the affrighted objects of pursuit, driven from every covert by the dogs, dart up and down the cripple, to fall victims at last to the unerring aim of the marksman. When the latter are up to their business, few, indeed, escape, although it must be said that, if the woodcock is naturally a stupid bird, as some people assert, cripple shooting is a rare mode of quickening his torpid facul-

ties. Under the spur of its application he sometimes betakes him to the wiles of his cousin, the snipe, turning and twisting on the wing so as to elude the shooter's aim—darting and flitting low round the trees and bushes, so as to disappoint his most sanguine calculations—now springing, with a shrill cry, at his very feet, and now stealing away silently, at his back, until the man grows bewildered in spite of himself, his dog loses heart, and the bird by sheer dint of its ingenuity escapes from them both.

It is ludicrous, in this case, to observe the manner in which either manifest their chagrin. The shooter besmirched, perhaps, from top to toe, his face begrimed with powder and his eyes blinded with sweat, mutters his disappointment in "curses not loud but deep" while Dash, in as sorry a plight, looks wearily up in his vexed face, with a despondent wag of his tail, as if, though loath to admit the fact, he needs must own that that cock was too much for him, too. This is the kind of shooting against which many sportsmen, with some appearance of pique and more of justice, yearly exclaim. Should the weather continue dry, it lasts from early in June until the birds leave the cripples to moult, in the month of August.

Some of the old haunts for cock along the Delaware were very famous in our young days. The drifts or higher portions of the flats, where the refuse of the tides had collected, were sure spots, especially those where the fisherman resorted to dig up worms. On the Cakehouse drift fourteen or fifteen birds have been killed in one morning. Hay Creek cripple was considered well worth hunting out, and at the name of Whitehall many old cock shooter will start as at the sound of a trumpet. This was situated on Hollander's Creek, and was esteemed the best place within ten miles around.

The drift at the head of Broad



Marsh, below the Point House, and all the drifts and cripples along the river and the creeks running into it, were, and are at the present day, excellent places for cocks in dry weather.

But if rain falls in any considerable quantity, the birds then leave these places and disperse over the meadows. Strange as it may sound to the sportsman, many persons who shoot are utterly ignorant of this fact. Mr. Krider was once invited by a friend to shoot cocks in the neighborhood of Wilmington, Delaware; the season had been dry; and many birds had killed in the cripples; but a heavy shower of rain having wet the meadows and corn-fields, the party hunted in the usual places in vain, to the great annoyance of his friend, who, having found them abundant for several successive days previous, could in no wise account for the sudden disappearance.

"Where do you shoot snipe?" inquired Krider, after the other had completely exhausted himself and his patience in his fruitless endeavors to show sport.

"In yonder meadow," he answered, "but you will find none there at this season."

"Let us try, nevertheless," said Krider.

After much persuasion he consented to lead the way, and in this meadow they killed twenty-seven cocks, to the great delight and surprise of the friend, who was now extremely anxious to visit all such golden spots within the compass of a day's hunt. The party brought in forty-five birds at night-fall, every one of which was killed in the meadows.

On another occasion, in the year eighteen hundred and forty-one, Mr. Krider, in company with a friend, killed sixty-three birds in a range of meadows and a maple swamp near Hightstown, New Jersey, by ten o'clock in the morning, returning to



Philadelphia the same day. The ground at this place had been so much improved since his visit that few birds are to be found there at the present day.

At most of the places where snipe shooting is abundant, cocks are also abundant in July if the grounds be sufficiently wet; but, at Port Penn, Delaware, some distance in the rear of Price's hotel, there is a maple swamp, surrounded by very thick tussock meadows, which was and, perhaps, is still very excellent ground. On one occasion, three shooters killed ninety-three birds before mid-day among the tussocks and in the swamp. We have at times found them abundant in the mountainous parts of the state in August, September, October; and on the tenth of November, when partridge shooting, in Lehigh county, we killed in the woods seventeen of the finest birds which we ever saw bagged. It is worthy of remark that, in the fall of 1845, we shot two woodcocks in a meadow, where a few moments afterwards, the dogs pointed snipe. This occurred in Montgomery county, on a small branch of the Perkiomen Creek, watering a valley a short distance from the little village of Salfordville. While killing a few partridges for the stable, we unexpectedly started three cocks from among

some scattered bushes which bordered a small run. Upon examining these, it was discovered that they had not yet done moulting. A few hundred yards further, six or seven snipe were sprung exactly in the place where we expected to find them, and while charging, a young dog in company, escaping our notice for a moment, ran out, stood in a piece of sedgy ground, partially covered with rank grass and rushes. On our approach he was staunchly backed by the old dog, and two more cocks sprung. The last proved to be in the same condition as the others: but though we beat this meadow carefully others in the course of the afternoon, we saw no more birds, nor have we ever found them since in a meadow at this season of the year.

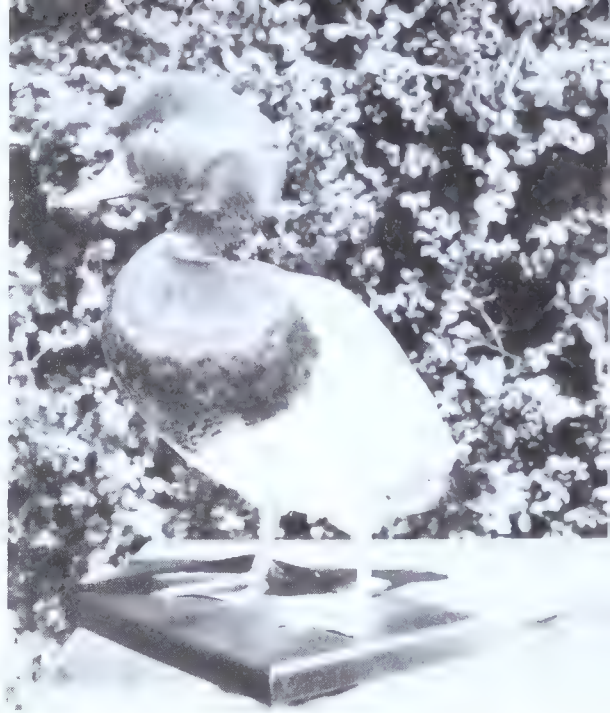
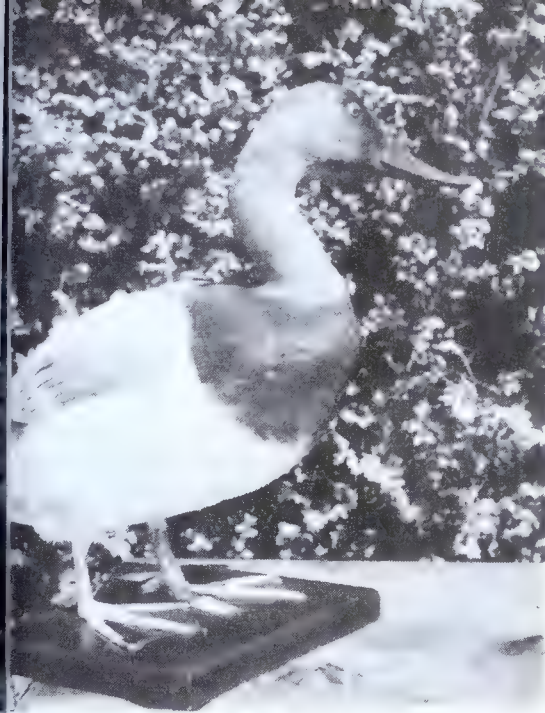
When hunting ruffed grouse in October, among the stony hills of Montgomery and Berks, we have sometimes killed cocks in small spots of black marshy ground in the very midst of the huge gray rocks, from someone of which a spring issued. During the heat of summer we have found them in dense, dry thickets and copses not far from the feeding ground, and when driven out into the glare of day they almost invariably pitch close to a fence, or a tree, as if blinded by the light. There is a small species of hawk which builds its nest in a retired part of the woods, and is a great enemy to these birds on the breeding ground. We have never been able to shoot or trap it. It has a shrill scream; is between the size of a sparrow-hawk and the *falco columbarius*, and is exceedingly watchful and wary. It often visits the orchard and the vicinity of the barn-yard early in the morning

to carry off young chickens. We have several times seen it swoop down from the topmost branch of a tree and seize a woodcock, and have spent hours in the woods on foot and on horseback following its cry in vain endeavor to shoot it, or to discover its nest. A son of the farmer informed us that he had twice found the latter near the top of very tall trees; in each case the young birds had flown, and the bottom of the nest was covered with the bones and other remains of various small birds. Its cry is heard in the deepest part of the woods, at all hours of the day; its tail is barred with white; but whether it is the *falco velox* of Wilson or no, we are unable to say.

We certainly never felt inclined to doubt the accuracy of Audubon's remark that the woodcock never feeds on salt marshes, until last summer, when we were requested by one of a party of four at supper, to taste a portion of a bird, which we did in turn, and all agreed that it was decidedly sedgy. This bird was one of eighteen which had been killed in a meadow below Pennsgrove, on the previous day, by two of the party present. They were served up with their heads on, so that no deception could have been practiced had the circumstances warranted such a suspicion.

When found in a meadow they are much more easily killed than snipe, and with steady dogs very few ought to escape. This bird, like the snipe, has a remarkably game look; some sportsmen before consigning them to the bag, display as much fondness over their victims, with this difference, that the latter spoke to living and the former to dead ears.





Redhead or Canvasback

By Bill Walsh

UP until now it's depended pretty much on a fellow's years and his personal taste whether he was more interested in redheads or canvasbacks (pun intended.) This year, however, the U. S. Fish & Wildlife Service is gonna make him treat them both pretty much alike. For in duck hunting states across the nation, a new regulation has been inserted into the waterfowl shooting literature which reads, in effect:

"Daily bag limit may not include more than 2 canvasbacks or 2 redheads, or 1 canvasback and 1 red-head."

Naturally interest in the identification characteristics of the two ducks is running pretty high. At first glance they look closer than first cousins to each other—but there are differences that even the casual hunter will notice now that he'll be more interested in doing so.

And since there's a vast difference between in-the-hand identification characteristics and those that can be

picked up when a flock of "cans" are getting ready to drop their landing gear in among your blocks, we'll attempt to separate the "close-up" and the "far-off" differences. This assumes great importance when the likelihood of a warden's over-your-shoulder inspection is imminent—and better still, will keep a fellow clean with his conscience.

Let's look at the close-up differences first. And let's take the males (drakes to all serious waterfowlers) first, too.

The long bill of the canvasback blends into its longish head without any apparent break, giving him a "low-brow" appearance. Just the opposite, the shorter bill of the head-head leads into a high forehead which gives him an "intellectual" appearance. All of which shows that appearances are as deceiving in ducks as they are in people, for the low-browed can is a much warier target than the redhead (the American Pochard) and while he is not the



FEMALE CANVASBACK is difficult to distinguish from the drake (he's on the left of page 29) and one good way to tell "cans" from redheads in the hand is the black bill.

most difficult duck in the world to decoy, he's not as much a push-over as the redhead. The latter will, in fact, often return to its fallen comrades, lying dead on the water, giving the hunter an opportunity to shoot again.

There is also a difference in bill coloration that makes in-hand identification a simple matter. The can's bill is dark (black is a better word) while the bill of the redhead resembles with its bluish cast and white ring the bill of the scaups (the bluebills).

This "lowbrow" and "highbrow" difference exists between the hens (the ducks) too. As does the coloration of the bill.

And, of course, the full-grown can is a larger bird than the redhead. Average weight of the redhead is 2½ pounds, while average weight of the canvasback is 3 pounds.

The can drake shows a pale, almost white back. The redhead drake shows a grey back.

A neck that is reddish for its full

length is one of the in-hand characteristics of the canvasback as well as the darkening on the face. In the redhead the lower neck is black. And whether near or far, it's easy to see that the canvasback is the rangier of the two—the redhead appearing more compact of body and less pointed of wing.

The females of the two species are more difficult to distinguish at a distance than the males—and in hand the surest identification is the "blue-bill" or scaup-type bill of the redhead as opposed to the black (like a new tire) bill of the canvasback.

The adults of the canvasback sport red eyes while the redhead eye is golden or yellow. A young canvasback male's eye is usually clear yellow up to about four months of age and a juvenile in this category might make a hunter wonder a bit. Usually, however, by the time the cans reach Pennsylvania the juveniles are almost like the adults and it's only in the more northern latitudes that the yellow eye of a young male canvasback would cause confusion.

Both canvasback and redhead ducks migrate in the traditional V-shaped flocks, but their behavior on the feeding grounds (something which gunners often get to see when flocks are resting mid-bay or beyond gun range on a lake) differs markedly. In moving about on the feeding grounds both species travel in large, irregular flocks. On the water, however, the canvasback seems the most sedate of the two. For they seem to mind their own business and go about feeding without ado except for genuine alarm. The redhead, however, is apparently restless. While rafting whole sections of the raft will suddenly rise up with much splashing and calamity, only to settle down again. After a few minutes of apparent peace the performance may be carried on again—even though there is nothing apparent to cause the disturbance.

And if your ducks are in a talkative mood, a fellow can get some idea of the difference between redhead and canvasback from the voices. The males of both species are not quackers at all. The redhead possesses a deep, vibrant tone which sounds something like the meow of a cat or a note on a violin. The canvasback male has a grunting note as well as a voice-tone that resembles a coo or a moo. Hen redheads have a quack-like note while hen canvasbacks utter a definite quack.

By way of interest—and nothing to do with identification—both birds are New World ducks. The European Pochard, the redhead's across-the-seas cousin has a dark spot at the base of the bill and is smaller. The canvasback has no counterpart overseas and is not even found as a straggler outside the North American continent.

When it comes to making an even closer comparison between the two ducks than "wheeling-in" or "in-hand" one can only be referring to an "on-the-table" type of difference. While the lordly canvasback is regarded as the epicure's delight, many experts claim that its half-pound difference in size is probably the biggest reason it has outclassed the redhead in this category. For many a hunter has no doubt wrapped his dentures around a redhead believing it to be the famous canvasback. Indeed, the diet of the redhead is even more vegetarian than the canvasback which can occasionally spoil the flavor of its flesh by too much fish (sometimes even available dead and rotting fish) in its diet.

Redheads are known to eat a diet of at least nine-tenths vegetable matter while canvasbacks are credited with four-fifths—or 90 per cent against 80 per cent.

The reason for the regulation bringing cans and redheads into the identification spotlight more clearly this year? Seems as though fewer of

these species returned to the breeding grounds last Spring than the U. S. Fish & Wildlife observers thought desirable. And nesting conditions this year were not ideal for either species. In fact, the redhead has been threatened for some years due to the reclamation for agriculture of its slough and pothole type of breeding ground in northern United States and southern Canada.

So, when you're hunting the big waters where these deep-water diving ducks are apt to be found, play it smart for this year as well as the years to come. When two cans or two redheads or one of each are in the bag (and you're not sure you're going to be able to tell the identity of the next flock that might come settling in) the best thing is to go home or find a marsh where you're sure of finding only woodies and mallards.

Or, to end this story on the same note on which it began, if you must get close to another redhead, find her back in town.

FEMALE REDHEAD, like the drakes, have "blue" bills and golden or yellow eyes. Redheads are much easier to decoy than "cans." Average weight of the redhead is 2½ pounds while the canvasbacks go 3 pounds.





TREE FARM CERTIFICATE is presented to Game Commission President C. Elwood Huffman, center, by District Forester Eugene F. McNamara and Service Forester Jake Kintz.

Commission President Joins American Tree Farm System

C. Elwood Huffman, President of the Pennsylvania Game Commission, not only believes in good forestry but he practices it as well. His woodland tract of 128 acres, in Monroe County was recently designated as a Tree Farm by the Delaware District, Department of Forests and Waters. President Huffman's home county of Monroe now has 21 Tree Farms with a total of 16,823 acres.

The nationwide American Tree Farm system is sponsored by the American Forests Products Industries, Inc. and now has 11,922 units covering 45,856,548 acres of forest land growing wood for man's use today and tomorrow. Pennsylvania has 429 Tree Farms with a total acreage of 250,000. The program is conducted in the Commonwealth by the Pennsylvania Forest Industries Committee with the cooperation of the Department of Forest and Waters and the Pennsylvania Forestry Association.

Tree farming and game management are very closely related. In the

case of the Huffman tract, the mature trees were removed on a selective basis leaving openings scattered throughout the forest for shrubs and tree seedlings to take over. This in turn produced an uneven aged forest or a forest with trees of all ages and sizes. This is an ideal habitat for whitetails and black bear. After the logs were removed from the woods, the branches and tops were slashed with some being scattered while others were thrown on piles. These brush piles are most appreciated by small game, especially when hiding from their enemies.

While this management program is taking place over the years the forest is actually improved and at the same time still enjoyable for hunting, hiking or riding through the woodland trails. Mr. Huffman has proven himself not only a leader in the resort business and in the Game Commission, but in forestry as well as evidenced by the recognition accorded him by the Department of Forests and Waters.

Pennsylvania Official 1958 Open Seasons and Bag Limits

(Regulations apply for Hunting License Year, September 1, 1958 to August 31, 1959)

Open season includes first and last dates listed, Sundays excepted, for game. The opening hour for small game, migratory game birds and other wild birds or animals on October 25 will be 8:00 A. M., EST. On other opening days, and otherwise during the season for upland and big game, the shooting hours daily are from 7:00 A. M. to 5:00 P. M., EST, excepting from July 1 to September 30 inclusive, 6:00 A. M. to 7:30 P. M., EST, and the hours for the October archers' deer season, which are 6:00 A. M. to 5:30 P. M., EST.

UPLAND GAME (Small game possession limits below)	BAG LIMITS		OPEN SEASONS	
	Day	Season	First Day	Last Day
Ruffed Grouse	2	8	Oct. 25	Nov. 29
Wild Turkeys	1	1	Oct. 25	Nov. 22
Squirrels, Gray, Black & Fox (combined)	6	30	Oct. 25	Nov. 29
Ring-necked Pheasants, males only	2	8	Oct. 25	Nov. 29
Rabbits, Cottontail	4	20	Oct. 25	Nov. 29 and
Rabbits, Cottontail ..(not more than 20 in combined seasons)			Dec. 27	Jan. 3, 1959
Bobwhite Quail	4	12	Oct. 25	Nov. 29
Hares (Snowshoe Rabbits)	2	6	Dec. 27	Jan. 3, 1959
Raccoons (hunting or trapping)	Unlimited		Sept. 1	Aug. 31, 1959
Woodchucks (Groundhogs)	Unlimited		Sept. 1	Aug. 31, 1959
Grackles	Unlimited		Sept. 1	Aug. 31, 1959
Squirrels, Red (closed October 1 to 24, incl.)	Unlimited		All mos. (exc. Oct. 1-24)	
Bears, over one year old, by individual	1	1	Nov. 24	Nov. 29
Bears, as above, by hunting party of three or more	2	2	Nov. 24	Nov. 29

DEER:	Bow and Arrow Season—Either sex, regardless of size. (Requires Hunting License and Archery License, but no Antlerless Deer License)		(only one deer for combined seasons)	
	ANTLERED DEER—Regular Season—Male with two or more points to one antler: Provided, a male deer with an antler three or more inches long without points, measuring from the top of the skull as the deer is in life, shall be considered legal, by individual		1	1
	ANTLERLESS DEER SEASON—(Requires Hunting License and Antlerless Deer License), by individual			
			Oct. 4	Oct. 24
			Dec. 1	Dec. 13
			Dec. 15, 16 and 17	

NO OPEN SEASON—Hungarian Partridges, Hen Pheasants, Sharp-tailed Grouse, Cub Bears, Elk, Otters.

FURBEARERS:

Skunks and Opossums	Unlimited	Sept. 1	Aug. 31, 1959
Minks	Unlimited	Nov. 22	Jan. 17, 1959
Muskrats (traps only)	Unlimited	Nov. 22	Jan. 17, 1959
Beavers (traps only) state-wide	5	Feb. 14	Mar. 21, 1959

SPECIAL REGULATIONS

POSSESSION AND TRANSPORTATION LIMITS of legally-killed small game shall mean not more than the daily limit for the first day nor more than an accumulated total for each succeeding day of the open season for each species; but not in excess of the season limit, regardless of where held, stored or found in possession.

DEER—Even though there are three separate seasons for taking deer, a hunter may not kill more than one deer during the three combined 1958 seasons, whether hunting individually or with a camp or hunting party. An Archery License is required during Bow and Arrow Season, issued only by County Treasurers at a fee of \$2.15, and the Department of Revenue, Harrisburg, at a fee of \$2.00. Antlerless Deer Licenses are issued only by County Treasurers at a fee of \$1.15, and valid only in the county for which issued. Farm occupants may hunt for deer during the Archery Season and the Special Antlerless Deer Season without a license on lands resided upon, or those immediately adjacent with the written consent of the owner or lessee. Under the law, no application for an Antlerless Deer License shall be approved, or license issued, to a nonresident prior to November 15, or after December 14, 1958.

BEAVERS—No trapping at Commission-posted dams. Nonresidents may not trap beavers. One person may set, tend or operate 10 traps only. Traps must not be set on the structure of any beaver dam or house, or within 25 feet of the waterline on the structure of either thereof. Tags must be kept above ice or waterline to facilitate identification without disturbing traps. Pelts must be tagged within 10 days after season, and may not be sold or otherwise disposed of until properly tagged. Present them to the Game Protector in District or County where trapped.

TRAPPING—Traps for furbearers not to be placed, staked or set before 7:00 A. M. on the first day of open seasons. The season indicated for Trapping closes at 12:00 o'clock Noon on last day. Traps must be tagged with metal name tags.

SNARES—The use of snares is prohibited in all counties except by special permit.

1958 PENNSYLVANIA OPEN SEASONS FOR WATERFOWL AND OTHER MIGRATORY GAME BIRDS UNDER FEDERAL AND STATE REGULATIONS

SPECIES	OPEN SEASONS FIRST DAY	OPEN SEASONS LAST DAY	DAILY BAG LIMITS	MAXIMUM POSSESSION LIMITS	LEGAL SHOOTING DAYS AND HOURS (SUNDAYS EXCEPTED) <i>Unlawful to hunt for any wild bird or animal, including migratory game, on October 25, 1958 prior to 8:00 A.M., EST.</i>
Sora	Sept. 1	Nov. 8	25	25	Sept. 1 to Nov. 8 1/2 hr. before sunrise to sunset
Rails (except Sora); Gallinules	Sept. 1	Nov. 8	15	30	Sept. 1 to Nov. 8 1/2 hr. before sunrise to sunset
Woodcock Wilson's or Jacksnipe	Oct. 15	Nov. 22	4	8	Oct. 15 to Nov. 22 1/2 hr. before sunrise to sunset
Doves	Oct. 15	Nov. 13	8	8	Oct. 15 to Nov. 13 1/2 hr. before sunrise to sunset
	Sept. 1	Nov. 4	10	20	Sept. 1 to Nov. 4 12:00 o'clock Noon to sunset
NO FEDERAL STAMP REQUIRED TO HUNT SORA, RAILS, GALLINULES, WOODCOCK, JACKSNIPES AND DOVES; STAMP REQUIRED TO HUNT DUCKS, GEESE, COOTS, AND BRANT.					

Ducks	Oct. 15	Dec. 13	4	8	Oct. 15 to Dec. 13 1/2 hr. before sunrise to sunset
(Daily bag limit may include 1 wood duck; possession limit 2.)					Oct. 25 only 8:00 A.M. to sunset

(Daily bag and possession limits may include 1 hooded merganser.)

(Daily bag limit may not include more than 2 canvasbacks or 2 redheads, or 1 canvasback and 1 redhead; possession limit may not include more than 4 canvasbacks, or 4 redheads; or 4 in the aggregate of both canvasbacks and redheads.)

Mergansers (American and Red-breasted)

Oct. 15	Dec. 13	5	10	(not to be counted in daily bag and possession limits on other ducks)
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Geese (except

Snow)	Oct. 15	Dec. 13	2**	4**
Coots	Oct. 15	Dec. 13	10	10
Brant	Oct. 15	Dec. 13	6	6

NOTE:

The season for waterfowl in the Counties of Bucks, Philadelphia and Delaware, and on the Delaware River bordering such counties, shall be November 10, 1958 to January 8, 1959.

The season for Wilson's or Jacksnipe in the Counties of Bucks, Philadelphia and Delaware shall be November 10, 1958 to December 9, 1958.

MIGRATORY BIRD HUNTING METHODS

Permitted: Bow and arrow, or shotgun not larger than 10-gauge, fired from shoulder (including hand-operated and semi-automatic repeating shotgun of not more than 3-shell capacity, which must be plugged to 3 shots so that plug cannot be removed without disassembling the gun); dog; blind; boat propelled by hand; floating device other than sinkbox; artificial waterfowl decoys. Injured or dead waterfowl may be picked up by means of a motorboat, sailboat or other craft. Shooting is permitted from a boat or other craft having a motor attached if such craft is fastened within or tied immediately alongside of any type of stationary hunting blind.

Prohibited: Use of electrical devices or recordings in taking migratory game birds; all rifles; live bird decoys; automobile; aircraft; sinkbox (battery); power boat, sailboat, or any device towed by power boat or sailboat. Waterfowl, coot, gallinules and doves may not be taken under any circumstances by the aid of salt, or shelled or shucked or unshucked corn, wheat, or other grains, or other feed or means of feeding similarly used to lure, attract, or entice such birds to, on, or over the area where hunters are attempting to take them. As used herein the terms "salt or shelled or shucked or unshucked corn, wheat, or other grains," or "other feed or means of feeding similarly used," shall not be construed as including salt

blocks, properly shocked grain, standing crops (including aquatics), flooded standing crops, flooded harvested crop lands, or, in connection with the hunting of waterfowl, coots and gallinules, grains found scattered solely as a result of normal agricultural practices, or, in connection with the hunting of doves, grains found scattered solely as a result of normal agricultural harvesting. Waterfowl may not be hunted by means, aid or use of cattle, horses or mules and no motor-driven land, water or air conveyance or sailboat may be used to concentrate, drive, rally or stir up waterfowl or coots.

FEDERAL STAMP FOR MIGRATORY BIRD HUNTING

It is unlawful for a person over the age of 16 years to take migratory waterfowl unless he carries on his person an unexpired Federal Migratory Bird-hunting Stamp, validated by his signature written in ink across its face. Not valid after June 30 following date of issue. This stamp is not required to hunt Sora, Rails, Gallinules, Woodcock, Wilson's or Jacksnipe and Doves.

** Not more than 2 geese of any kind (except Snow Geese) in a straight or mixed bag a day, or 4 singly or in the aggregate in possession.
NO OPEN SEASON—SNOW GEESE AND SWANS.

Biennial Report...

OF THE
PENNSYLVANIA
GAME
COMMISSION



1956-1958







OFFICE OF
THE PRESIDENT

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION
HARRISBURG

October 1, 1958

To His Excellency George M. Leader
Governor of Pennsylvania
Harrisburg, Pennsylvania

Sir:

It is with considerable pleasure that we transmit our report for the biennium June 1, 1956 - May 31, 1958. It shows marked progress in the wild-life restoration program. The accomplishments which contributed to this progress are highlighted in the report itself.

As you very well recall the untimely death of our Executive Director, Dr. Logan J. Bennett, on September 12, 1957 was a severe shock from which we have not yet recovered. He did much to help mold and advance our future program. However, we believe that the Commission's policy of progression will be carried out with equal ability and enthusiasm by his successor, M. J. Golden, who was appointed to succeed Dr. Bennett on January 3, 1958.

We greatly appreciate the personal support you have given our endeavors. Our sincere thanks also goes to our conservation minded citizenry -- legislators, sportsmen, farmers, women's, patriotic, and service organizations and others who have cooperated in so many different ways.

Respectfully submitted,
C. E. Huffman, President
Andrew C. Long, Vice-President
Nicholas Biddle
John C. Herman
Herbert Buchanan
Dewey H. Miller
Russell M. Lucas
James A. Thompson

Attest:

M. J. Golden
Executive Director



TWO YEARS IN SUMMARY

REVENUE

During the two year period cash receipts of the Commission totalled \$10,207,136.77. Disbursements amounted to \$8,934,479.31. Thirty-one cents of each dollar was used in land management; twenty-two cents for game propagation; twenty cents for law enforcement and the balance for bounty payments, research and other miscellaneous activities. For a complete report of the status of the Game Fund refer to the tabulations in the appendix.

PERSONNEL

The Commission and the sportsmen lost a fine friend and an able Director through the untimely death on September 12, 1957 of Dr. Logan J. Bennett while attending the International Association of Game, Fish and Conservation Commissioners at Las Vegas, Nevada. Dr. Bennett will long be remembered as a nationally known sportsman, biologist, wildlife administrator and field trial judge, the qualifications which earned for him the coveted Winchester Outdoorsman of the Year Award for 1956.

Although Dr. Bennett's passing was a great loss, the Commission gained the services of another capable and progressive leader in the person of one of its own long-time employees, M. J. Golden. He was appointed the Commission's Executive Director on January 3, 1958. A native of Jessup, Lackawanna, Mr. Golden began his career with the Game Commission in 1929 as a Deputy Game Protector. In 1935 he was appointed to the position of Traveling Game Protector in northeastern Pennsylvania and in 1936 he was transferred to Berks County as a Game Protector. In 1940 he was promoted to Field Division Supervisor in the Southeast Division a post which he held until 1949 when he was assigned to the Harrisburg Office to head its Cooperative Farm-Game Project Program. In October 1955 he was again promoted to the position of Deputy Executive Director, the position he held at the time of Dr. Bennett's death.



RETIREMENTS

Mrs. Mary E. Fisher, 1951 Mulberry Street, Harrisburg, retired May 14, 1958, after having served as Clerk-Typist and Graphotype Operator since October 12, 1943.

Louis B. Geiger, 1813 Letchworth Drive, Highland Estates, Camp Hill, retired May 30, 1958 after having served continuously in the Accounting Section as Assistant Chief of Office Maintenance, and Accountant since September 16, 1931.

Harold L. Plasterer, 1420 Regina Street, Harrisburg, Supervisor, Bounty Claims Section, retired November 1, 1957, after having served with the Commission since October 23, 1923.

Theodore T. Schafer, R. D. 1, Honesdale, retired August 1, 1957, having served as Assistant District Game Protector, Traveling Game Protector and District Game Protector since July 5, 1933.

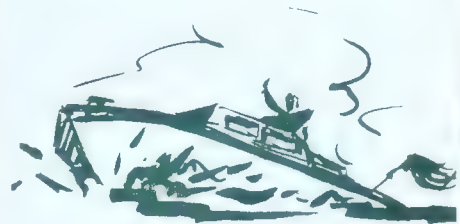
E. Bruce Taylor, 29 S. 19th Street, Harrisburg, retired March 29, 1958 after having served for almost twenty-two years in the capacity of Principal Abstractor and Head Abstractor.

Clarence J. Weaver, 1125 N. Front Street, Harrisburg, Purchasing Agent, retired December 1, 1957 after having served as Buildings Assistant, Construction Engineer (prior to his appointment as Purchasing Agent) since December 1, 1931.

Leslie H. Wood, 3 Eberenz Street, Wellsboro, retired January 1, 1958 after having served for almost twenty-six years as a District Game Protector.

Edgar M. Woodward, 785 Barkley Drive, Bedford, retired January 1, 1958 after having served for over twenty-five years as a District Game Protector.

Bruce P. Yeager, 66 Queen Street, Northumberland, retired January 1, 1958, leaving behind him a record of almost thirty-four years as a District Game Protector.



NEW COMMISSIONERS



JAMES A. THOMPSON

James A. Thompson, R. D. 1, Grubbs Road, Wexford, Allegheny County, was appointed to the Commission June 28, 1957, to fill the vacancy created by the resignation of Ross L. Leffler.



RUSSELL M. LUCAS

Russell M. Lucas, 112 Seventh Street, Philipsburg, Centre County, succeeding Thomas L. McDowell, Bradford, whose term expired.

IN MEMORIAM

Dr. Logan J. Bennett

Dr. Logan J. Bennett, 330 W. Main Street, Mechanicsburg, died suddenly September 12, 1957 at Las Vegas, Nevada, while in attendance at the 1957 convention of the International Association of Game, Fish and Conservation Commissioners. During Doctor Bennett's tenure of office as Executive Director from September 15, 1953 to his untimely death he served with distinction.

John C. Kase

John C. Kase, 501 Chestnut Street, Mifflintown, died June 14, 1957. He served as a Technician and Game Land Manager since October 21, 1946.

Mark P. Motter

Mark P. Motter, 3608 Centerfield Road, Colonial Gardens, Harrisburg, died May 20, 1957. He served as Game Refuge Keeper and District Game Protector respectively from October 23, 1930 until his death.

O. M. Pinkerton

O. M. Pinkerton, former District Game Protector, Indiana County, died December 9, 1957, in Washington, D. C. He served the Commission from 1935 to 1944.

Richard R. Roth

Richard R. Roth, R. D. No. 2 Tunkhannock died February 27, 1957. After graduation from the Commission's Training School May 1, 1951, he was assigned to a District in Wyoming County as a Game Protector and served in that capacity until his untimely death.

Edward L. Shields

Edward L. Shields, former District Game Protector, Elk County, died December 9, 1957 in St. Mary's. He served the Commission from 1933 to 1944.

Edward Shaw

Edward Shaw, former District Game Protector, Northwest Division, died in Leeper April 9, 1957. He served the Commission in the pioneering days from 1920 to 1950.

Robert E. Zimmerman

Robert E. Zimmerman, Shiremans-town, met his untimely death in a tragic automobile accident near Danville, May 13, 1957, while en route from Shiremans-town to Forty Fort to report for a conference at the Division Office. At the time of his death Officer Zimmerman had been assigned as a District Game Protector in Wayne County. He graduated from the Commission's Training School March 16, 1957.

ROSS L. LEFFLER



On January 1, 1957 Ross L. Leffler, a member of the Commission for almost thirty years, and its President for fifteen years, resigned to accept the post of Assistant Secretary of the Interior, a newly created post having administrative supervision over the U. S. Fish and Wildlife Service.

Mr. Leffler was first appointed to the Commission, January 24, 1927 and served until December 31, 1931. He was reappointed March 26, 1935 and resigned January 1, 1957.

Mr. Leffler is Past President of the International Association of Game, Fish and Conservation Commissioners, and he was Chairman of the 17th American Game Conference. He helped to organize the Pennsylvania Federation of Sportsmen's Clubs and was the organizer and President of the state's first chapter of the Izaak Walton League.

In 1950 Mr. Leffler was named Pittsburgh's "Man of the Year" because of his untiring efforts toward the safety and welfare of the Steel City in war and peace times. He has been honored nationally for his great contributions to the Boy Scout movement in the United States and is presently a National Director.

In the steel industry he occupied numerous high administrative positions, and held the title of Assistant to the Executive Vice-President of the U. S. Steel Corporation at the time of his present appointment.

TWENTY-FIVE YEAR CLUB

During the Biennium, fourteen (14) employees completed twenty-five (25) years service with the Commission. They are automatically included in the total of sixty-six (66) as of August 8, 1958, (41 still in the service and 25 retired). Those included during the Biennium were:

T. C. Carlson, District Game Protector, Clearfield

Elmer C. Alexander, District Game Protector, Belleville

Louis B. Geiger, former Accountant, Accounting Section, Highland Estates, Camp Hill

Francis E. Jenkins, P. R. Area Leader, Huntingdon

Clarence F. Walker, District Game Protector, Beavertown

John Spencer, District Game Protector, Mount Pocono

Clarence J. Weaver, former Purchasing Agent, Division of Administration, Harrisburg

Leon P. Keiser, Supt., State Wild Turkey Farm, PSR. Williamsport

Leslie Wood, former District Game Protector, Wellsboro

Clinton Ganster, Supervisor, Bounty Claims Section, Marysville

Edgar M. Woodward, former District Game Protector, Bedford

Louis H. Estep, District Game Protector, Berwick

Mrs. Zelda E. Ross, Circulation Section, Pennsylvania Game News, Penbrook

John S. Dittmar, District Game Protector, Loysburg



RECOGNITIONS

Dr. Logan J. Bennett, late Executive Director, was chosen by the nation's leading outdoor writers to receive the Third Annual Winchester Outdoorsman of the Year Award for 1956.

Dr. Bennett was also appointed a member of the U. S. Navy's Advisory Committee on the Management of Natural Resources on Navy and Marine Corps properties to represent the State Game and Fish Departments' interests.

Leo A. Luttringer, Jr., Conservation Education Assistant, Division of Administration, was presented a Certificate of Merit in the 1956 Nash Conservation Awards Program for 1956 for his efforts in the interest of soil, water, forest, fish and wildlife.

John Sedam, Chief of the Division of Minerals, was awarded first place and a bronze plaque for his bulletin "Wildlife in the Farm Program" by the American Association for Conservation Information in its Annual Award Program for 1956. The Commission's film on the "Life History and Management of the Wild Turkey" was runner up in the motion picture competition of the Association's award program for 1957.

Mr. M. J. Golden, Executive Director of the Commission, became an ex-officio member of the Migratory Bird Conservation Commission consistent with the establishment of the first National Wildlife Refuge within the Commonwealth.

In its Annual Award Program the Pennsylvania Public Relations Society, in March 1958 awarded the Commission the following honors:

- | | |
|---|-------------|
| Magazine format, Pennsylvania Game News | — 1st prize |
| Motion picture, Eastern Wild Turkey in Pennsylvania | — 1st prize |
| Newspaper format, Commission Newsletter | — 2nd prize |
| Organization, booklet, Organization, Policies, and Programs of the Commission | — 2nd prize |
| Special booklet, Pennsylvania Trapping and Predator Control Methods | — 3rd prize |

Competition was judged by the School of Journalism of the Pennsylvania State University.

CONFERENCES ATTENDED



Numerous important conferences and meetings were attended by members of the Commission, the Executive Director and staff. In some instances papers were delivered by Commissioners and personnel. Summed up the meetings provided wonderful opportunities for exchanging ideas which were mutually beneficial.

Outdoor Writer Convention, University Park, Pennsylvania, June 17, 1956; Pittman-Robertson and Dingell-Johnson Co-operators, DeBruce Conservation Camp, DeBruce, New York, September 24-27, 1956; Northeast Wildlife Conference, New Haven, Connecticut, January 6-8, 1957; Atlantic Waterfowl Technicians Meeting, Westboro, Massachusetts, February 5, 6, 1957; National Outdoor Writers Convention, Aberdeen, Washington, June 23, 1957; International Association of Game Fish and Conservation Commissioners and American Fisheries Society, Las Vegas, Nevada, September 9-12, 1957; Conservation Law Enforcement Association, Lake Placid, New York, June 11-14, 1957; Federal Aid Coordinators Meeting Northeastern States, Ross Leffler School of Conservation, Brockway, Pennsylvania, September 5-6, 1957; Northeast Wildlife Conference, Montreal, Quebec, January 4-7, 1957; American Association for Conservation Information, Biloxi, Mississippi, May 22-25, 1957; Northeast Area Conference U. S. Department of Agriculture Commodity Stabilization Service, New York, September 4-6, 1957; Outdoor Education Workshop, Blue Knob State Park, Bedford County, Pennsylvania, October 9, 10, 11, 1957; North American Game Breeder's Convention, Pittsburgh, Pennsylvania, February 9-11, 1957; American Association for Conservation Information, Eagle River, Wisconsin, May 25-28, 1958; Atlantic Waterfowl Council Technicians Meeting, Quakertown, Pennsylvania, February 4-5, 1958; North American Wildlife Conference, St. Louis, Missouri, March 3, 4, 5, 1958; Outdoor Education Conference, Philadelphia, Pennsylvania, April 29, 1958; Outdoor Education Conference, Washington, D. C., May 8-10, 1958; Atlantic Waterfowl Council Meeting, Burlington, Vermont, May 21-23, 1958.

Official meetings of the Commission were held as follows: July 10, 11, 1956, Harrisburg; October 17, 18, 1956, Harrisburg; January 3, 4, 1957, Harrisburg; April 5, 6, 1957, Ligonier; June 5, 6, 1957, Bellefonte, Special Meeting; July 1, 1957, Harrisburg; August 12, 1957, Harrisburg, Special Meeting; October 15, 16, 17, 1957, Meadville; January 3, 1958, Harrisburg; April 3, 4, 5, 1958, Mt. Pocono.

Other meetings: In-Service Training Conference, Mont Alto, August 26-30, 1956; In-Service Training Conference, Mont Alto, August 25-28, 1957; Deer Management Seminar, State University, May 27, 1958.



VISITORS

From outside the Commonwealth

Dr. Frederick B. Lincoln, author of books on migratory birds and Special Assistant to the Director of the U. S. Fish and Wildlife Service—mid-October, 1956.

Senator A. Willis Robertson of Virginia, well-known legislator who, while a Congressman, co-sponsored the famous Pittman-Robertson Bill—week of November 12, 1956.

R. D. Donoho, Commissioner at Large, Arkansas Game and Fish Commission and Eugene Rush, Chief Biologist—first week of March, 1957.

Minnesota State Legislative Committee, March 6, 1958.



To fill the ranks caused by retirement, death or resignation the Commission enrolled twenty candidates in its School of Conservation during 1956, eighteen of whom graduated. They are presently serving as Game Protectors.

NEW LEGISLATION



Section 101. *Definitions.* Provides protection for all hawks during the months of September and October in that portion of northeastern Pennsylvania within the migratory flight lane of these birds of prey. Properly defined it begins at Easton, Pennsylvania and extends in a southeasternly direction along U. S. Highway Route No. 22 to the Susquehanna River at Harrisburg, then in a northernly direction along the Susquehanna River and the west branch thereof to a point where State Route No. 405 traversed said river at Muncy. From there the line extends in a northeasternly direction along State Route No. 405 to Hughesville, thence extending in an easternly direction along State Route No. 115 to the junction of State Route No. 29 at Pikes Creek. The line then proceeds in a northernly direction along State Route No. 29 to the Pennsylvania State Line then easternly and southernly along the Pennsylvania State Line to Easton, the point of beginning.

Section 317. This section was amended to permit the occupants of farms to hunt deer on lands resided upon or immediately adjacent thereto without an archery license.

Section 501. *Hunting Seasons and Bag Limits.* Authorizes County Treasurers to issue archery licenses and to permit the hunting of deer of both sexes with bow and arrow during the exclusive archery seasons thereby eliminating the requirement of an antlerless deer license during such season.

Section 502. *Bag Limits.* Exempts from the provisions of the section the killing of antlerless deer and spike bucks during the archery season.

Section 702. *Fixes Hunting Hours.* Whenever any exclusive archery season is held in October the hunting hours shall be from 6.00 a.m. to 5:30 p.m. Eastern Standard Time.

Section 705. *Unlawful Killing of Big Game.* Exempts the killing of antlerless deer and spike bucks during the archery season from the provisions of the section.





Section 720. *Permits for Field Trials.* Authorizes field trials without permit from August 1 (in lieu of August 20) to the close of the dog training season; also authorizes field trials, under proper permit, from the close of the dog training season (now March 31) to July 31 instead of April 30.

Section 722. *Permits for Fox Hunting Clubs.* Authorizes fox hunting by clubs from August 1 (in lieu of August 20) to close of dog training season March 31.

Section 731. *Penalties.* Applies penalties to the whole or any substantial part of birds or animals.

Section 903. *Purchase Price.* Establishes a limit of \$100 per acre for State Game Lands. The previous limit was \$30.

Section 936. *Archery Preserves.* Permits County Treasurers to issue Archery Preserve Permits.

Section 938. *Special Dog Training Areas.* Permits holders of permits for such areas to allow public hunting of bear and deer thereon.

Section 1002. *Possession of Firearms or Dogs.* Permits foreign-born residents to own or possess dogs.

Section 1202. *Procedure.* Provides that all summary proceedings shall be brought before the nearest available magistrate, alderman or justice of the peace.

Section 1212. *Return of Fees, Fines, etc.* Authorizes the refund of moneys both erroneously and unjustly collected.

Section 1217. *Liability for Costs Clarified.* This section was completely revised to fix liability for costs not paid by the defendant.

Section 1401. *Appropriation for Refund of Fines.* This section was amended to appropriate money for refunds *unjustly* collected, and to authorize the Commission to accept donations from any person, firm, corporation or association which shall be placed in "The Game Fund" and used for the purposes set forth in this section.



This program embodied a wide and diversified area of education which included among other things sustained thirteen week TV programs, the production of sixteen new motion pictures including a feature on the wild turkey; and several cooperative projects between the Commission and the Department of Public Instruction, the Future Farmers, 4-H Clubs, Jr. Conservation Clubs and Boy Scouts.

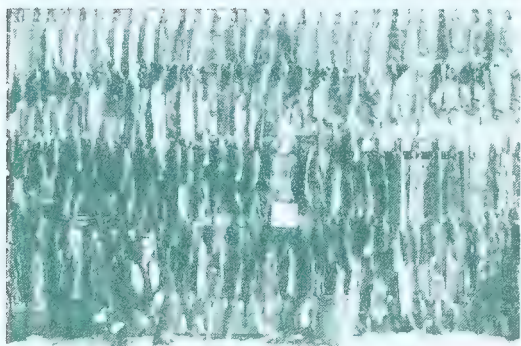


Numerous projects were conducted under the Commission's research program including: An evaluation of habitat development for wildlife; wild turkey study; white-tailed deer study; right-of-way management study; woodcock management study; experimental management of the Conemaugh flood control reservoir tract and water-fowl banding.

More than 15,000 acres were added to the area of State Game Lands bringing to total land holdings to over 922,000 since the land purchase program began in 1920.



Nearly ten million pieces of game were killed during the two year period, a complete summary of each species appears later in this report. It is mute testimony to the fact that Pennsylvania offers its gunners some of the finest and most diversified hunting in the world.



Due to the low market on long-haired furbearers, trappers made no special effort to harvest these animals. The return to trappers during the two year period amounted to only \$1,527,080.17, covering the sale of 1,257,712 pelts.

A close liaison was maintained with the press and the Outdoor Writers of the Commonwealth through a Weekly Newsletter sent to all of these public information agencies. Special and seasonal releases were also sent to radio and television stations.





ND MANAGEMENT

Construction and Maintenance

More than 38 miles of roads, nine miles of fire trails and eleven corn cribs were constructed to provide access for management and storage facilities for equipment and corn used in winter feeding.

Maintenance included approximately 4,100 miles of boundary lines, 970 miles of equipment roads, 635 miles of fire trails, and 115,000 acres of refuges, propagation areas and special preserves. All Commission-owned buildings were kept in repair.

Under the Small Marsh Development Program, nine marsh ponds were completed. These impoundments flooded over 93 acres of marsh land located on State Game Lands and other publicly owned land. This acreage of water and adjoining wetland will materially supplement existing natural and developed areas for waterfowl by furnishing additional feeding and resting grounds.

Food and Cover Development

Timber on over 7,525 acres of State Game Lands was harvested by local lumbermen, \$523,659.62 was received as payment for 20,221,519 board feet of sawlogs, 1,522 tons of mine timber, 26,127 cords of paper and chemical wood, 99,157 mine props and posts, 1,511 evergreen trees and 34 cords of firewood. Timber sales during this period have increased greatly over any previous twenty-four month period since timber was first sold from State Game Lands in 1936. The sale of forest products in wooded areas has augmented the Commission's wildlife habitat im-

provement program. These benefits are derived by opening the forest canopy, permitting sunlight to enter. Sprout growth and other vegetative reproduction is increased, providing more food and cover for game.

Over 2,190 acres of timberland were improved for wildlife through the medium of forest release cuttings, thinning of timber stands, pushing over inferior forest growth with bulldozers, and releasing fruit trees. Over 37,560 fruit trees, principally apple, were pruned to improve fruiting. Woodland border release cuttings were conducted on many acres. A total of approximately 1,000 acres were cut, providing strips of brush cover averaging 46 feet wide for a distance of 942,127 linear feet along woodland and forest edges. Over 147 acres of older border cuttings were recut. These recutting operations averaged 40 feet wide for a distance of 121,967 linear feet.

Border cuttings have proven valuable in small game management by providing better game cover adjoining fields and other



openings. Food conditions improve also by increased sprout growth and better fruiting of shrubs and vines.

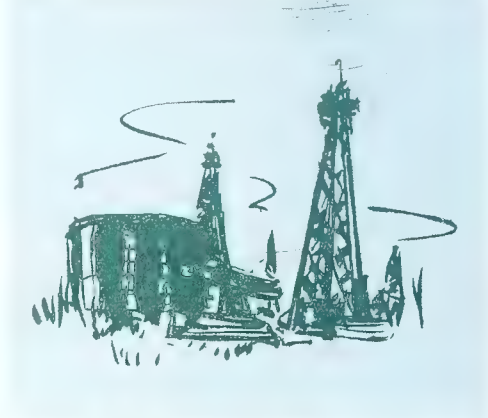
Personnel cleared 442 acres of forests and reverting fields to provide new food strips. One thousand seven hundred and thirty-five acres were seeded to grasses and clovers; 9,387 acres were mowed; 1,910 acres limed and 2,468 acres fertilized to improve nesting sites and food conditions for wildlife. In addition, nearly 2,600 acres of Game Lands were planted to grains or seeded to grasses and clovers by share-cropping farmers. Strip-cropping and other approved soil conservation practices were followed when planting fields on Commission-owned lands.

Howard Nursery

The Howard Nursery was deeded to the Commission by the United States Government late in 1957. This valuable property of 77 acres had been under lease from the Soil Conservation Service since January, 1954, until it was deeded, at no cost, to the Commission. During the period of this report 9,401,000 conifer, shrubs and vine seedlings were shipped from the nursery. Of this number over 5,567,443 were planted on Commission-owned or leased lands with the balance of 3,833,557 distributed to sportsmen, Boy Scouts, and other groups promoting conservation, to be planted on lands open to public hunting.

During this period the Commission's Land Purchase Program increased State Game Lands from 907,221 to 922,723 acres. The Commission now owns land in 63 of the 67 counties of the Commonwealth.

Cooperative Farm Game Projects have decreased by 16,104 acres during the period with a total of 1,029,325 acres of this widely copied program. Attention has been given to development of existing leased areas.



MINERALS

The Game Fund was enriched by more than \$142,000 in oil and gas royalties bringing the revenue acquired from these resources since 1953 up to more than \$1,000,000. This income has been ear-marked by the Commission for purchasing additional Game Lands and facilities for Field Division Headquarters.





LAW ENFORCEMENT



Prosecutions

Game Law prosecutions numbered 7,138 for which \$289,917.05 was collected in penalties. The ratio of successful cases is a tribute to the excellent judgment exercised by field officers.



Revocations

Hunting and trapping privileges were denied 2,503 persons convicted of violating the Game Law including 121 persons who lost these coveted privileges because of negligence or carelessness in the handling of firearms.



Bear Damage

Sixty-six claims amounting to \$2,434.22 were paid for damage by bears to livestock, beehives and poultry.

Deer-proof Fencing

The Commission paid \$9,995 for wire fencing supplied to farmers under a cooperative program with landowners to protect farm crops, fruit orchards and commercial nurseries from extensive deer damage.



Uniforms

New summer weight uniforms and replacement dress uniforms were supplied all field officers at a total approximate cost of \$10,000. New style summer hats and replacement dress hats also were provided at a cost of approximately \$2,467.82. Five hundred and twenty-five pairs of shoes were furnished at a cost of \$5,409.75. Raincoats binoculars, sidearms, traps and other necessities also were issued at a cost of \$8,891.35. The Commission is always interested in keeping its field personnel at a high level of appearance as well as of service.

Special Permits

Special permits numbering 4,083 were issued and \$41,526 in fees collected. They included Game and Fur Propagation, Raw Fur Dealer's, Regulated Shooting Grounds, Taxidermists', Field and Retriever Trials, etc.

Short Wave Radio

Ground work was laid and bids requested for the installation of a state-wide system of radio communication. A portion of the cost will be borne by Civilian Defense.

Deputies

The present duty force of approximately 1,500 makes a good workable unit which can be administered properly. These officers are doing a fine job and should be commended.

Bounty

Bounty claims numbering 20,351 for the killing of 22,822 gray foxes, 35,974 red foxes and 2,349 great-horned owls were paid, amounting to a total of \$246,929. Two hundred and eighty-nine questional claims were investigated, resulting in the payment of \$1,615 in penalties.



Pheasants

Game Farms operated at capacity to produce more than 1,000,000 pheasant eggs, nearly 40,000 of which were shipped to cooperating agents. Sportsmen and other cooperators in the day-old pheasant chick program were furnished more than 460,000 birds. Mature birds released as a result of these operations numbered over 154,000.

Quail

One hundred and sixteen thousand bobwhite quail eggs were produced of which 42,000 were shipped to sportsmen. More than 14,000 day-old quail were shipped to sportsmen. The entire operation resulted in the release of more than 18,000 twelve-week old birds and 12,000 adults.

Wild Turkey

The turkey farm produced more than 32,000 eggs and shipped 2,600 eggs and 1,300 poults to cooperators. More than 6,400 twelve to eighteen week old birds and 5,700 adult turkeys were released for stocking various forested areas in the Commonwealth.

Game Trapping

More than 115,000 cottontail rabbits and 2,600 ringneck pheasants were trapped where no hunting is permitted and released where public shooting is allowed.



SPECIAL EVENTS AND PROJECTS

Safety Program

In May 1958 the Commission embarked on a statewide program of hunter and firearms safety in collaboration with the National Rifle Association. The aim of the Commission is to qualify youngsters eleven years of age and upwards so they can handle firearms safely at home and in the field. This project was moving rapidly forward at the end of the biennium.

Wild Turkeys to Germany

In an effort to cooperate with officials in West Germany in restocking depleted forests with game birds, the Commission

shipped ten young wild turkeys to Dr. Joseph Effertz, Minister of North Rhine-Westphalia in September 1957. The birds arrived October 5. The results of the undertaking will be awaited with interest.

Deer to Kentucky

Twenty-four fawn deer were sold to Kentucky to help increase the population of these animals in the Blue Grass State.



DIVISION OF ADMINISTRATION

Personnel is the major factor in administering Pennsylvania's vast wildlife conservation program. The table below shows the number of salaried and hourly employees at the end of the two fiscal years covered by this report:

Number of Employees

<i>Date</i>	<i>Salaried</i>	<i>Hourly</i>	<i>Total</i>
May 31, 1957	283	278	561
May 31, 1958	281	308	589

The number of hourly employees indicated were not all full-time, as the total includes unskilled laborers temporarily employed to meet seasonal requirements.



HUNTING LICENSES

Pennsylvania's Wildlife Conservation Program is financed mainly by the sale of hunting licenses to resident and non-resident hunters. This is supplemented by revenue from other sources, such as penalties for Game Law violations, special permits, timber sales and Federal Aid.

During 1956 there were 902,540 resident and 35,524 non-resident hunting licenses issued. This established an all-time record which was again broken in 1957 when 929,990 resident and 40,527 non-resident licenses were issued. It might well be stated, based on the game harvest which appears later in this report, that this vast army of nimrods enjoyed the most diversified hunting to be found anywhere in the country, perhaps in the world, for a very nominal fee.

The Pennsylvania Department of Revenue handles all matters relating to the issuance of hunting licenses, including the settlement of accounts with issuing agents and the transmittal of monies accruing from such sales to the Treasury Department for deposit in the Game Fund. The number of licenses issued during the past five years is given below:

<i>Year</i>	<i>Resident</i>		<i>Non-Resident</i>		<i>Total</i>
	<i>Fee</i>	<i>Number</i>	<i>Fee</i>	<i>Number</i>	
1953*	\$3.15	859,783*	\$20.00	30,664	890,447
1954*	3.15	869,286*	20.00	30,827	900,113
1955*	3.15	898,542*	20.00	32,471	931,013
1956*	3.15	902,540*	20.00	35,524	938,064
1957	3.15	929,990	20.00	40,527	970,517

* Includes free licenses issued to Disabled Veterans as follows:

1953-646; 1954-709; 1955-766; 1956-765; 1957-825.

Non-resident Three-day Special License

Under the provisions of the Game Law, there were 2,608 Non-resident Three-day Special Regulated Shooting Grounds Licenses issued in 1956 and 2,762 in 1957. The fee for these licenses, issued for three consecutive days only, is \$3.15. This license entitles the holder to hunt, take or kill on lawfully operated regulated shooting grounds only, all wild birds and animals which may be legally hunted, taken or killed in the Commonwealth on such grounds and to participate in a shoot held thereon under a regulated shooting grounds permit.

Archery License

The Commission, acting under the provisions of the Game Law, declared the sixth and seventh exclusive archery seasons for the hunting of deer. In 1956 the season was October 1 through October 19 and included only antlered deer. In 1957 the season was October 5 through October 12 and, for the first time, included either sex, regardless of size.

The table below, which gives the number of licenses issued and the number of deer killed by bow hunters by years, reflects the keen interest in this rapidly growing sport:

Year	Number of Licenses Issued	Number of Deer Killed
1951	5,542	33
1952	8,446	24
1953	10,691	84
1954	14,769	55
1955	17,318	119
1956	26,210	224
1957	55,559	1358

The privilege of killing, for the first time in 1957, a deer regardless of size or sex obviously was a contributing factor to the increased archery license sale over 1956.

Hunting Accidents

The Commission used every means at its disposal to promote hunting safety. This included releases to the press, radio and television, talks by Commission personnel and sportsmen, motion pictures, posters, and educational material included in a Digest of Hunting and Trapping Regulations issued with every hunting license. While some mishaps occurred, it is believed the vigorous campaign produced worthwhile results.

During the two year period there were 44 fatal and 935 non-fatal accidents. There was one fatal accident for every 43,377 hunters, based on a two-year average of 954,295 hunters. A 34-year compilation (1924-1957) of these accidents shows an average of 36 fatal casualties annually, 41.2% of them self-inflicted. During this long period, the average was one fatality for every 19,113 hunters, based on an average of 688,061 hunters per year.



List of Hunting Accidents During the Past Years

	1949	1950	1951	1952	1953	1954	1955	1956	1957
Self Inflicted:									
Fatal	10	4	9	7	5	9	9	5	2
Non-fatal	71	69	86	78	79	73	74	64	85
Inflicted by others									
Fatal	15	12	16	17	29	12	10	25	12
Non-fatal	382	380	300	284	430	437	454	383	404
Totals	478	465	411	386	543	531	547	476	503
Licenses issued:	839,947	834,172	857,322	862,821	890,447	900,113	931,013	938,064	970,517

Game Harvest

Aside from the recreation they obtain, which cannot be measured in dollars and cents, any reasonably successful hunter secures much more than his license money's worth. If the Game Commission were to try to replace the annual harvest from sources other than Mother Nature, which of course is next to impossible, the cost would be prohibitive. To replace only the deer killed in 1956 and 1957, if that were possible,

would cost \$11,027,775; bear \$62,000; rabbits \$5,971,848; hares \$17,915; squirrels \$3,334,938; raccoons \$672,310; wild turkeys \$459,555; ruffed grouse \$2,288,525; pheasants \$4,736,310; and quail \$44,948, or an aggregate replacement value of \$26,637,377. The fact that none of the animals are replaceable in sufficient quantity to meet demands proves beyond doubt that good game management is the only answer to a continued abundance of wildlife.

	1957 Game Kill Number	1956 Game Kill Number
Deer, Legal Antlered	49,254**	41,921***
Deer, Legal Antlerless	55,862**	(Closed)
Total Deer	105,116	41,921
Bears	294	335
Rabbits	1,455,862	1,530,062
Hares (Snowshoes)	1,614	1,969
Hungarian Partridges	(Closed)	(Closed)
Squirrels	728,342	939,127
Raccoons	139,397	129,527
Wild Turkeys	16,156	14,481
Ruffed Grouse	41,694	49,847
Ringneck Pheasants	465,955	446,266
Quail	12,057	10,417
Woodcocks	9,854	11,126
Rails, Gallinules & Coots	5,609	6,835
Grackles (Blackbirds)	***	*
Wild Waterfowl	64,625	77,616
Woodchucks	311,497	326,044
Doves	39,699	24,838
Total Number	3,397,771	3,610,411

* Small Game, based on Field Officers estimates; Big Game, based on individual reports filed by hunters.

** Includes 1,358 deer killed during the 1957 Special Archery Season.

*** Unprotected—No data.

ANTLERLESS DEER SEASON



1. The low 1956 winter kill which would tend to increase the already acute incidences of highway accidents unless the deer population was decreased.
2. Deer damage resulting from deer being forced into the marginal areas, seeking food, became more acute in many sections.
3. In the interest of reproduction of desirable forest growth to improve small game habitat, the Commission declared a three-day season, December 16, 17 and 18, immediately after the antlered season, to harvest some excess deer. Special Antlerless Deer Licenses costing \$1.15 were required. The quota established for 66 counties (Philadelphia County excepted) was 336,500 of which 334,660 licenses were issued. Sportsmen reported killing 55,284 animals during the three days.

The Counties, County Seats, and the number of Antlerless Deer Licenses made available to hunters in Pennsylvania for this season are listed below:

County	County Seat	No. of Licenses	County	County Seat	No. of Licenses
Adams	Gettysburg	2,200	Lackawanna	Scranton	4,000
Allegheny	Pittsburgh	1,000	Lancaster	Lancaster	1,500
Armstrong	Kittanning	3,250	Lawrence	New Castle	1,200
Beaver	Beaver	1,000	Lebanon	Lebanon	3,000
Bedford	Bedford	4,500	Lehigh	Allentown	1,500
Berks	Reading	5,000	Luzerne	Wilkes-Barre	7,500
Blair	Hollidaysburg	3,400	Lycoming	Williamsport	8,100
Bradford	Towanda	7,000	McKean	Smethport	16,500
Bucks	Doylestown	2,600	Mercer	Mercer	2,300
Butler	Butler	5,000	Mifflin	Lewistown	3,200
Cambria	Ebensburg	5,000	Monroe	Stroudsburg	6,500
Cameron	Emporium	4,000	Montgomery	Norristown	1,500
Carbon	Jim Thorpe	7,000	Montour	Danville	1,000
Centre	Bellefonte	7,500	Northampton	Easton	2,000
Chester	West Chester	2,000	Northumberland	Sunbury	3,000
Clarion	Clarion	4,000	Perry	New Bloomfield	4,750
Clearfield	Clearfield	6,000	Philadelphia	Philadelphia	....
Clinton	Lock Haven	3,000	Pike	Milford	8,250
Columbia	Bloomsburg	5,000	Potter	Coudersport	11,000
Crawford	Meadville	6,500	Schuylkill	Pottsville	10,000
Cumberland	Carlisle	3,500	Snyder	Middleburg	2,100
Dauphin	Harrisburg	4,000	Somerset	Somerset	8,750
Delaware	Media	500	Sullivan	Laporte	7,000
Elk	Ridgway	15,000	Susquehanna	Montrose	8,250
Erie	Erie	5,000	Tioga	Wellsboro	7,500
Fayette	Uniontown	2,800	Union	Lewisburg	2,650
Forest	Tionesta	15,000	Venango	Franklin	6,000
Franklin	Chambersburg	4,100	Warren	Warren	15,000
Fulton	McConnellsburg	2,850	Washington	Washington	1,000
Greene	Waynesburg	1,200	Wayne	Honesdale	8,500
Huntingdon	Huntingdon	5,000	Westmoreland	Greensburg	7,100
Indiana	Indiana	5,100	Wyoming	Tunkhannock	5,100
Jefferson	Brookville	5,500	York	York	3,000
Juniata	Mifflintown	3,250			
TOTAL					336,500



TRAINING

The Commission continued a policy established in 1936 for training new field personnel and on June 30, 1956 enrolled a class of twenty (20) student officers for a course of instruction at its Ross Leffler School of Conservation located on State Game Lands No. 54 in Jefferson County. These men were selected after qualifying in competitive, written and oral examinations and were subject to a training period in all phases of game management and related subjects. Eighteen (18) of the students successfully completed the course and were appointed Game Protectors on a year's probationary basis upon graduation March 16, 1957. At the end of March 1958 all of these men successfully qualified and are presently serving as regular District Game Protectors.

At its January 1958 meeting the Commission again decided to enroll a new class of trainees and selection of this new group was well under way at the close of the current fiscal year, May 31, 1958.

In addition to training new officers, an In-Service Training Course of four-day duration was held at the Mont Alto School of Forestry in August of 1956 and 1957, in which all of its field personnel and many employes of the Harrisburg Headquarters participated.

Training seminars conducted by the Governor's Office of Administration were also attended by a number of staff officers in Harrisburg who considered themselves very fortunate to have been selected for this high-echelon training.



VISUAL AIDS



A feature motion picture on **THE EASTERN WILD TURKEY IN PENNSYLVANIA**, the first of its kind, was produced by the Commission. It dramatically portrays the life history and management of this famous game bird and vividly depicts the manner in which it was saved from extinction and restored as an important natural resource. Since its production, which took three and a half years of painstaking effort, it has received numerous high compliments, was awarded First Prize in 1958 by The Pennsylvania Public Relations Society, an honorary prize in the American Association for Conservation Information, and was selected for viewing at the National Salons in Edinburg, Scotland and Venice, Italy. It is color and sound and runs approximately thirty (30) minutes.

The Commission conducted sustained TV programs of thirteen weeks each, from mid-September to mid-December in 1956 and 1957. The subjects, which depicted all segments of the Commission's program were of twelve and a half (12½) minutes duration and were very favorably received. The programs were well received by the TV viewing audiences. All of the films were later sent to the Field Division offices for use in connection with local programs and at various meetings.

Numerous other pictures were produced including such subjects as **THE BLACK BEAR, THE BEAVER, PENNSYLVANIA BIRDLIFE, HOMES FOR WILDLIFE, CAFETERIAS FOR WILDLIFE, THE PYMATUNING WATERFOWL SANCTUARY, THE DAY-OLD PHEASANT CHICK PROGRAM,**

Numerous 35mm color transparencies were obtained during the biennium from which three major lectures were prepared and distributed to the Field Division Supervisors. They comprised a discussion of the Commission's waterfowl management program; a 115 slide lecture on the all over management program; and more than 200 slides on Pennsylvania bird-life.





MAJOR EXHIBITS

Major exhibits were displayed at the State Farm Show; the Philadelphia Motor Boat and Sportsmen's Show, Philadelphia and the Allegheny County Free Fair, Pittsburgh. Sixty-six (66) token exhibits also were displayed at the local level.

Records indicate that more than a half million persons visited the Commission's permanent wildlife exhibit at Hershey and the Pymatuning Waterfowl Museum near Linesville, Crawford County each year. The popularity of these two facilities is tremendous, and they have become nature schools for thousands of school children. The Hershey Museum contains twenty-one (21) major wildlife displays; while the Pymatuning features nearly three hundred (300) species of mounted waterfowl and shorebirds."

In 1957 small token exhibits were prepared for the Field Divisions, each one different in its physical aspects, but versatile enough to portray most of the Commission's programs through dioramas, mounted specimens, photographs, other props, etc.

The Commission's museum at Hershey was improved by removing older exhibits and including new ones. Some of the newer units included: natural and artificial homes and feeding stations for wildlife and songbirds; a beaver family at home; a group of albino deer, including buck, doe and fawn.

Lectures

More than 7,200 meetings of sportsmen, farmers and farm youth groups, granges, school children, women's and garden clubs, civic and church organizations were attended by field and office personnel of the Commission. Emphasis is being placed on conservation education in the schools and on hunter and firearms safety.

Contacts made and meetings attended by six Conservation Education Assistants from June 1, 1956 to May 31, 1958:

Contacts

Columnists	394
Editors	117
Radio Personnel	102
TV Personnel	78
Key Individuals	4826

Meetings

Colleges	61
High Schools	162
Jr. High Schools	120
Elementary Schools	106
Youth Organizations	120
Boy Scouts	162
Jr. Sportsmen	30
Future Farmers & 4-H	18
Girl Scouts	37
Granges	26
Sr. Sportsmen	536
Miscellaneous	136

Camps

Boy Scout	77
Church	37
Others	52

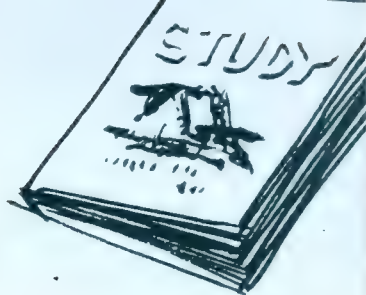
Club Organizations

Assistance in forming	10
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Special Programs

Television	25
Radio	21
Trapping demonstrations ...	58
Token exhibits	66
Major exhibits	6

SPECIAL PROGRAMS



Annual grants were provided to the following organizations: The Carnegie Museum, Pittsburgh; Academy of Natural Sciences, Philadelphia; the Future Farmers of America; and the Conservation Education Laboratory for Teachers at the Pennsylvania State University, to further the conservation program.

The Commission participated in a pilot project aimed at the conservation education of school children by presenting this theme to sixth grade pupils in the Brockway School Area of Jefferson County for three days during 1956 and 1957. The results proved that school children are very receptive to the subject and more schools are being encouraged to follow this example.

The Commission provided instruction and materials at each of the two three-week sessions of the Conservation Laboratory for Teachers at Pennsylvania State University during the summers of 1956 and 1957. It also participated in a special three-day conservation

program for sixth graders of the Brockway School District during the summer of both years at the Ross Leffler School of Conservation.

The Commission took an active part in the National Boy Scout Jamboree held at Valley Forge in July 1957. Several of its representatives served on important committees of this outstanding affair and a large wildlife management exhibition was displayed in three areas of the encampment.

In October 1957 the Commission cooperated in an outstanding outdoor education workshop conducted at Blue Knob State Park, Bedford County. This attempt to invoke outdoor education in our schools and colleges is a wonderful step in the right direction and will be further stressed in the future.

As a result of a cooperative wildlife management program between the Commission and the Future Farmers, many thousands of farm acres were improved from the standpoint of wildlife food and cover. A comparable program was carried on by 4-H Clubs in nearly half of the counties in the Commonwealth.

A shoulder insignia, designated as a Conservation Award of Merit, was prepared in the form of a keystone containing the ruffed grouse, Pennsylvania's State Game Bird, as a token of recognition to Junior Club members, Boy Scouts, FFA and 4-H Clubbers who make outstanding contributions to the conservation program.





JUNIOR CONSERVATION CAMP

The Commission furnished instructors and material assistance to the Pennsylvania Junior Conservation Camp sponsored by the Pennsylvania Federation of Sportsmen's Clubs during the summer months of 1956 and 1957. This outdoor camping experience was enjoyed by 318 high school boys in eight separate sessions.

PUBLICATIONS

The Commission's official monthly magazine "Pennsylvania Game News" continued to maintain nationally recognized quality in both text and format. Paid circulation during these two years averaged 44,690 copies per month and an additional 15,000 copies were mailed on a complimentary basis to other state and federal conservation agencies, sportsmen's associations, members of the Legislature, outdoor writers, newspapers, public school libraries, Deputy Game Protectors, and landowners enrolled in the Commission's Cooperative Farm-Game Program.

Other publications distributed on a paid basis during the period included: A set of four bird charts in full color; a set of four bird and mammal charts in full color; a booklet, "Pennsylvania Wildlife;" a book, "Birds of the Pymatuning;" a "Sportsman's Map of Pennsylvania;" and a booklet, "Pennsylvania Trapping and Predator Control Methods."

Three completely new publications were prepared and distributed including: "Pennsylvania's Wildlife Conservation History; The Pennsylvania Game Commission's Organization, Policies and Programs;" and "A Suggested Program for Junior Conservation Clubs." The pamphlet containing the rules and regulations for the "Future Farmer Wildlife Conservation Program" was revised to include new practices.



PUBLIC RELATIONS

The Game Commission's Weekly Newsletter and Special Releases from Harrisburg have continued to contribute, through all the news media, toward public understanding of Pennsylvania's wildlife management program.

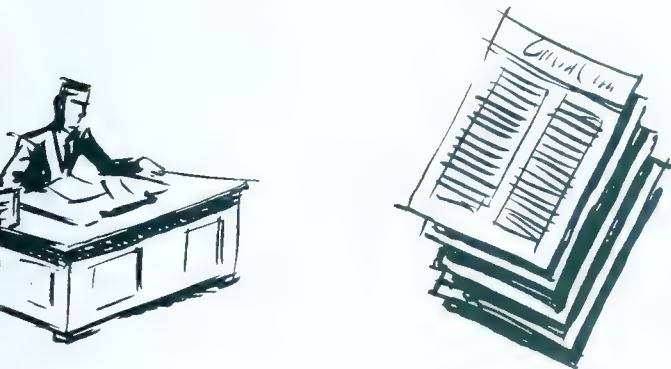
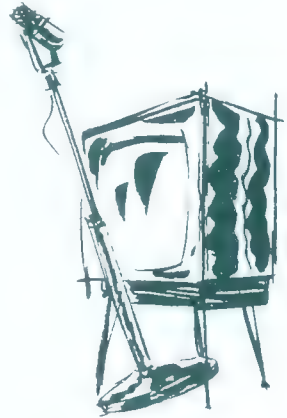
PUBLIC INFORMATION

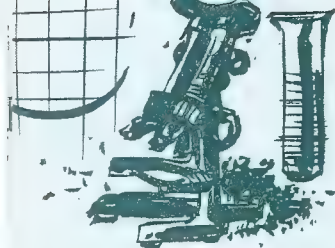
The Weekly Newsletter was sent to 661 newspaper editors in Pennsylvania; 77 newspaper editors in adjoining states; 163 radio and television stations, most of which are in Pennsylvania; reporters in the Capitol News Room; and to all active and retired Commission personnel.

Some 35 to 40 Special Releases were sent at timely periods during each year, usually with the Newsletter. Items for immediate attention are on such subjects as: game and fur seasons; hunter safety; laws and regulations having to do with hunting and trapping; information on the acquisition of state game lands or the establishment of water impoundments for waterfowl, etc.

A close liaison was maintained with outdoor writers, newspaper editors, radio and TV broadcasters and the several state and federal agencies and organizations engaged in natural resource conservation, thereby advancing all around knowledge of wildlife management in the Keystone State.

Public relations and publicity at the local level was carried on by Conservation Information Assistants in each of the six administrative divisions and by the 150 District Game Protectors throughout the Commonwealth.





DIVISION OF RESEARCH

Present day wildlife management is a science which has come of age. It embraces a number of interrelated programs. Playing an increasingly important role is research. Research may bear even more emphasis as more intensive management of the shrinking acreage available for wildlife becomes necessary. Research studies and investigations are designed to furnish facts and information for the efficient utilization and protection of our wildlife resources, for the development of potential wildlife areas and for the management of game lands and populations.

The research studies during the period of this report were carried on under the Federal Aid in Wildlife Restoration Program. Hence 75 per cent of the cost of these projects are paid from Pittman-Robertson funds allocated to Pennsylvania. Additional research studies were in progress during this period at the Cooperative Wildlife Research Unit at The Pennsylvania State University to which a grant of \$24,000 was made for this biennium.

Research studies carried on in the Division under P-R during the biennium included:

Experimental Management of the Conemaugh Flood Control Reservoir Tract

This area offers a tremendous potential for development and demonstration purposes. A variety of techniques are being tested for manipulations of food and cover for game. Game populations and harvests as related to these developments and to hunting pressure are investigated.

A minor investigation of the influence of temporary flooding on vegetation and wildlife has been active. Because much of the land available for management is above the maximum flow level, flooding has not seriously affected development work.

The results of the studies on this area will contribute to a better understanding of food and cover manipulations, game populations and harvest, hunting pressure and a variety of other factors.

Right-of-Way Management Study

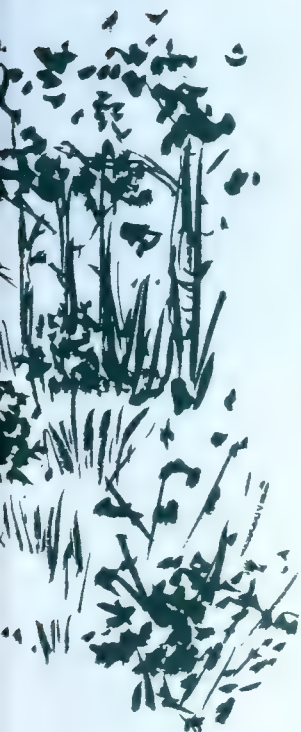
Multiple use of lands and forests is essential to modern living. The many power and pipe line rights-of-way can serve wildlife in addition to their primary purpose. This investigation was to determine proper management methods for these areas for maximum benefits to wildlife. It involved preparation, planting, spraying and other treatments and an evaluation of the results, and utilization by game species. Also included in this study was an investigation of plantings for strip mine spoil banks.



Woodcock Management Study

Manipulation of vegetation to rejuvenate, prolong or establish desirable woodcock habitat has been a major feature of this study. Facts on the ecology of desired shrub and tree species were essential and many of these had to be drawn from intensive study of the important species. Management practices for woodcock coverts definitely benefit other species of small game and hence have a definite place in the overall management scheme.

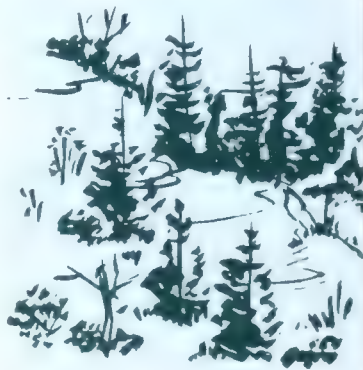
Breeding ground and hunting season surveys provided population information. Extreme hunting pressure on local breeding birds loomed as a controlling feature on resident populations. Plans have been made to test this premise by releasing woodcock in desirable breeding areas. In order to handle these birds after they are captured on the wintering grounds, it was necessary to develop a dosage of sedatives. Also techniques for holding the birds until the season advanced to guarantee their survival when released had to be devised. As another test of the overshooting of local populations, certain areas were set aside as "request refuges." Early results indicate that this protection has been effective in increasing the number of breeding birds.



An Evaluation of Habitat Development for Wildlife

The largest share of the Game Fund dollar is expended for the management of land for wildlife. The efficiency and economy of this program hinge on an evaluation of the practices, methods, plant species and equipment utilized. Determination of the most productive measures, etc., is essential to the progress of the management program.

As a part of this study, evaluation of Club areas and suggestions for Club use to improve these areas have enhanced the recreational potential and have been of tremendous educational value.



WILDLIFE STUDY



Wild Turkey Study

The relation of habitat to turkey populations was investigated along with other factors which may influence populations on the long established range. Additional wild trapped birds were introduced to evaluate the results of the transfer of wild birds.

Because much effort has been expended in winter feeding of wild turkeys, a study of the winter habits and feeding was included. The effect of periods of starvation was investigated as this knowledge is important in the design of an efficient winter feeding program.

A check of turkeys bagged during the hunting season was undertaken to determine sex and age composition of the turkey kill. This information, in view of the intense interest in turkey hunting, along with other data and information obtained through this study will prove valuable in management of this highly prized game bird.

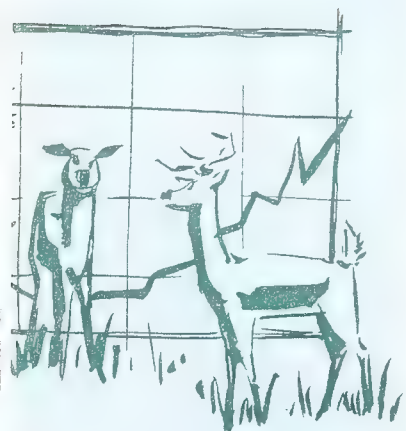


White-tailed Deer Study

Many factors must be considered in the management of the deer herd. This study was designed to obtain a vast store of facts and information upon which sound management can be based.

An investigation of the effects of the use of sodium arsenite for chemical debarking of pulpwood has been carried on. Browse surveys and population surveys are undertaken annually. Many deer are examined during the open hunting season and throughout the year to obtain age and sex ratios, weights, reproduction and physical condition data, and to learn of any diseases or abnormalities.

Much of the information obtained through this study is essential to a better public understanding of deer management.



WATERFOWL BANDING

In conjunction with the nationwide effort, many ducks and geese are captured and banded annually. This is a part of the continual study of waterfowl migration, management and populations.

Miscellaneous Studies

An investigation to determine the possibility of reestablishing snowshoe hares in habitat which appears suitable but far removed from natural sources of hares is underway. Reproduction of released hares has been evident on some sites while on other sites released stock did not survive.

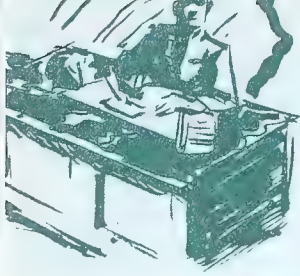
Sex and age compositions of the grouse kill have been determined through studies of wing and tail feathers submitted by sportsmen. This information is important in analyzing reproductive success and in following cyclic trends.

Cooperative Studies

The Cooperative Wildlife Research Unit at The Pennsylvania State University completed several studies during the biennium. These were a 10 year ruffed grouse study and a cottontail rabbit study of similar duration. Other active major studies include:

A Study of the Effect of Seasonally Restricted Food Intake on Growth and Antler Development of White-tailed Deer, Food and Cover Values of Hawthorns, Range and Winter Food Requirements of Wild Turkeys, Gray Squirrel Habitat Study, and Mourning Dove Population Study.





DIVISION OF LAND MANAGEMENT

Food and Cover Section

Annual maintenance on all owned and leased lands, with the exception of Cooperative Farm Game Projects, included over 4,100 miles of boundary lines; 970 miles of equipment roads; 635 miles of fire trails; and refuges and special areas totaling over 115,000 acres. Proper upkeep is essential if respect of the public is to be expected.

Thirty-eight (38) miles of equipment roads were built to provide access to food strips, and nine (9) miles of fire trails constructed to increase protection in forested areas. In addition, twelve (12) storage sheds and eleven (11) corn cribs were constructed to store farming equipment and various harvested grains. Commission owned buildings and equipment was kept in repair.

Management of Food Strips and Open Field Areas

This program included the clearing of 442 acres of forest area or reverting fields and the seeding of 1,735 acres to clovers and other cover crops to improve habitat for wildlife. Over 15,825 bushels of surplus grain was harvested from large food strips and fields and fed to wildlife at other locations.

Grazing and nesting sites on old field areas were improved by mowing 9,387 acres, fertilizing 2,468 and liming 1,910 acres, thus greatly benefiting these game management areas.

Sharecrop farming on State Game Lands was continued.

More than 2,600 acres were planted to grains and cover crops by adjoining farmers, the Commission's share amounting to 19,570 bushels of harvested crops and 118 acres of standing grains. Soil conservation practices and proper crop rotation were followed when farming these lands, thus improving the crops and conserving soil and water. Through application of these practices, many lands became local demonstration areas.

Purchase of food strips on private lands provided supplemental food on farms open to public hunting. Under the program, 190 strips of standing grains and grasses, totaling over 90 acres, were reserved for wildlife, thus improving areas previously stocked by the Commission.

Timber Sales and Forest Cuttings

The sale of forest products improved food and cover for wildlife on your 7,525 acres of State Game Lands. These sales provided a cash return of \$523,659.62. Products removed included 20,221,519 board feet of saw timber; 1,522 tons of mine timbers; 26,127 cords of paper and chemical wood; 99,157 posts and props; 34 cords of firewood and 1,511 Christmas trees.

In addition to the areas of State Game Lands improved for wildlife by selling timber, over 2,190 acres were developed for forest game through other types of cutting. Treatment included

releasing food producing trees, shrubs and vines by felling overshadowing tree growth; thinning timber stands; felling all trees on small blocks to provide low, dense game cover; pushing over inferior tree

growth with bulldozers; and releasing scattered apple trees. Over 37,560 apple trees were pruned. Game on approximately 37,000 surrounding acres benefited from these operations.



Howard Nursery

This seedling nursery was leased by the Pennsylvania Game Commission from the United States Government, effective January 1, 1954, and deeded to the Commission in October, 1957.

During the first half of the biennium 3,210,000 seedlings were shipped from the nursery and in the last half of the biennium 6,191,000 conifer and shrub seedlings were released, making a total of 9,401,000. The nursery can furnish the expected 5,000,000 seedlings annually in future years which is the production figure established by the Commission at the April, 1955 meeting.

Waterfowl Management

Twenty-five acres of waterfowl feeding grounds were improved by planting wheat seeded to grass.

Food strips were cleared and areas prepared for planting around the shorelines of the newly constructed marsh ponds.

Seedlings and Transplants

More than 2,382,150 tree, shrub and vine seedlings were planted to improve food and cover for wildlife on over 750 acres of State Game Lands and leased areas.

Small Impoundment Program

This rapidly growing and popular program included plans for twenty-seven of the impoundments. Construction was completed on five located on State Game Lands and four on the Allegheny National Forest, which will flood a total of 93 acres. Construction was started on one additional impoundment on State Game Lands. As the dams are being constructed, food and cover corps employees clear plots along the future shorelines to improve aquatic growth and provide open areas on which small food strips will be planted.





WILDLIFE MANAGEMENT

Two crews, one operating in Forest and Warren Counties, and the other in Elk and McKean Counties, planted 219 strips totaling 226 acres to grains, clovers and grasses; improved nesting cover and clover growth by mowing, liming and fertilizing approximately 463 acres of field areas.

In addition, game food and cover around plantations, and along equipment roads and woodland edges, were improved by felling large trees for an average of 35 feet along over 42,500 linear feet of these woodland borders. Existing native shrubs released by this operation will produce an abundance of fruit. Thousands of other shrubs and apple trees were released when competitive tree growth was felled on over 235 acres, and 3,140 of these were pruned.

This wildlife development work deserves and receives much enthusiastic praise from local and visiting sportsmen.

Federal Aid Projects

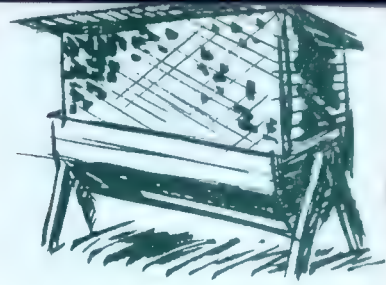
The Federal Aid in Wildlife Restoration Act provides that the United States Government will finance seventy-five per cent of approved wildlife management projects. Since a large per cent of such activities are located on State Game Lands, reports of various projects are presented as follows:

Food and Cover and Farm Game Development—The preparation of food and cover management plans; execution of all food and cover development work; and the leasing, mapping, establishing and developing of Cooperative Farm Game Projects are partially financed by this project. A coordinator is employed to service the paperwork, including reports of all kinds, to see that charges are made to the proper P-R allotments, to make periodic inspection in the field and to standardize practices.

Accomplishments under the Farm Game Cooperative Section, the growing of tree, shrub and vine seedlings in the Howard Nursery, and the Food and Cover Development work which has been summarized in preceding pages, are credited to this Federal Aid in Wildlife Restoration Project.



WINTER FEEDING and Miscellaneous



Severe winter weather is often responsible for a decrease in forest and farm game populations. To offset this, it is necessary to place large amounts of harvested grain in sheltered areas during winter months. Over 130,000 bushels of corn and other grains were distributed by Game Commission employees. An additional 57,145 bushels were given to conservation organizations, Boy Scouts, 4-H Clubs, etc., for use in local game feeding projects. Commission employees purchased and distributed over 137,890 pounds of salt to locations where deer will utilize it as a necessary supplement to their diet.

Miscellaneous activities included repair and erection of duck nesting boxes; cultivating and pruning over two miles of multiflora rose hedge; fertilizing of asiatic chestnuts and seed of native shrubs for planting in the Howard Nursery.

Farm Game Cooperative Section

The Cooperative Farm Game Program which is still one of the Commission's best farmer-sportsmen relations projects, totaled 1,029,325 acres and included 166 projects consisting of 10,232 farms, as of May 31, 1958.

Since funds limited the program to approximately 1,000,000 acres, which were already leased at the end of the last biennium, there has been very little change in its status except for some cancellations and the execution of new agreements.

Meetings

One of the public relations aspects of the program is reflected in the fact that project personnel participated in 141 meetings of sportsmen, farm groups and soil conservation districts attended by 5,711 persons. They also attended 247 in-service training meetings.

Farmer Contacts

During the period the following number of farmers were contacted:

By District Game Protectors 22,312
By Food and Cover Crops .. 42,900

Refuges

Refuges were established, maintained or removed as follows:

- a. Established 3—containing 28 acres
- b. Maintained 600—containing 5,981 acres
- c. Removed 34—containing 384 acres

Safety Zones

A total of 20,886 safety zones were established and dismantled.





WILDLIFE DEVELOPMENT AND SOIL CONSERVATION PRACTICES

Field personnel, in an effort to improve wildlife habitat on farm areas, assisted project cooperators establish the following practices:

1. Contour strips surveyed on 60 acres.
2. Seedlings distributed to farms and planted by cooperators:

a. Coniferous	2,422,260
b. Multiflora Rose	613,100
c. Other Special	340,758

Total 3,376,118

3. Seedlings planted by Commission personnel:

a. Coniferous	82,750
b. Multiflora Rose	66,500
c. Other Species	340,758

Total 167,850

Grand Total—All Seedlings 3,543,968

4. Food strips—the following game food and nesting cover strips were purchased from cooperators:

280 strips containing 122 acres

Planted by Commission personnel:

81 strips containing 49 acres

5. Wildlife borders—Personnel increased game food and cover along woodlot edges by establishing the following wildlife borders:

Cut	400,871 Lin. Ft. 25 Ft. Wide
Planted to	
Shrubs	25,970 Lin. Ft. 25 Ft. Wide
Seeded to	
Lespedeza	12,445 Lin. Ft. 25 Ft. Wide

6. Farm Ponds—Technical assistance and advice was furnished on the following farm pond sites:

a. Investigated	17
b. Recommended	9
c. Completed	32

7. Drainage of suitable areas or poorly drained soils provides additional wildlife nesting sites. Personnel furnished advice and technical guidance in the construction of 672,546 linear feet of drainage which improve 686 acres.
8. Pasture Improvement—Cooperators improved 184 acres of pasture on the advice of Commission employees. This provided available food and cover for wildlife.
9. Diversion Ditches Surveyed—9,100 linear feet which will improve 1,036 acres.
10. Woodland Management—Furnished management advice on 2,787 acres.
11. Material distributed to cooperators:
Crow repellant—593 pints. This aided materially in preventing crows, blackbirds and pheasant damage to corn.
12. Other Practices—3,400 linear feet of woodland border was recut; 60 fruit trees were pruned; 39 acres of food strips (clovers) were mowed, limed and fertilized. In addition, 14,000 linear feet of rose was cultivated and fertilized.





GAME STOCKED

Game Stocked on Project Areas Only

The following wildlife was released on the project areas:

Rabbits	21,223	Squirrels	118
Wild Turkey	313	Quail	6,727
Pheasants	127,391	Ducks	370

Total pieces of game stocked—136,142

Game Killed on Project Area Only

Rabbits	528,291	Waterfowl	5,474
Wild Turkey	274	Coon	26,277
Woodcock	2,241	Quail	6,899
Squirrel	212,165	Grouse	11,664
Pheasants	207,132	Doves	24,139
Woodchucks	69,285	Deer	5,558

Total pieces of game killed—1,037,672

Predators Removed on Project Areas Only

Red Foxes	8,363	Gray Fox	7,013
Opossum	26,361	Owls	841
Weasels	3,608	Others (stray cats, crows, skunks, etc.	9,963
Hawks	5,362		

Total predators removed—63,211

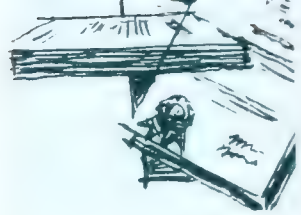
Number of Hunters Using Projects & Man Days Hunted

Number of hunters	442,117
Man days hunted	1,116,774

Hunting Accidents on Project Areas Only

A total of 242 accidents occurred on project areas. One fatal and 241 non-fatal.

LAND TITLES AND RECORDS



As of May 31, 1958, the total area of Game Lands owned by the Commission was 922,722.87 acres, divided into 206 units. This was a gain of 15,501.87 acres and 8 units during the biennium. However this gain does not fully reflect the progress made. Since the Commission had 25,226.0 acres under contract, and waiting only for completion of title work and surveys at the close of the biennium. This was almost twice the amount acquired during the entire period. Game Lands are distributed in 63 counties. Those counties not having any Game Lands are Adams, Delaware, Montgomery and Philadelphia. Of these four, Adams is perhaps the only one which will ever have a Game Land, because of the advanced urbanization and high land costs in the other three. Of the total area in the Game Lands, 897,073.87 acres are open to hunting and 25,649.0 acres, divided into 99 units, are included in Primary Refuges which are closed to hunting.

The Commission paid a total of \$3,720,884.94 for the purchase of all of the Game Lands owned at the end of the biennium, or an average of approximately \$4.14 per acre. Purchases completed amounted to \$260,930.60, or an average of approximately \$16.84 per acre. Like everything else, the cost of land has increased sharply since the program was started in 1920. The cost of title examinations, surveys and settle-

ments, etc., is charged off as current expense and is not included in the costs listed above.

Six Game Farms are owned by the Commission having a total area of 3,118.7 acres. They are not included in the purchases given above which are for Game Lands only.

The Statutory Fixed Charges paid to the Counties, Township Road Supervisors and Township School Districts in lieu of taxes, at $7\frac{1}{2}\text{¢}$ per acre in 1956 and 10c per acre in 1957, amounted to a total of \$158,927.77.

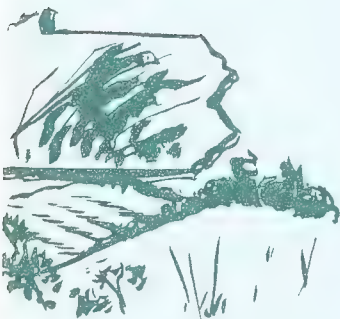
Projects on land not owned by the Commission did not fare as well as the projects on land which the Commission owns, all categories but one having shown some decrease. Primary Refuges in State Forests, etc., decreased from 43 units, with a total area of 23,443 acres to



33 units with a total area of 18,924 acres. Cooperative Farm-Game Projects decreased in number from 166, comprising 10,251 farms, to 165, comprising 9,971 farms, and from 1,045,429 to 1,029,325 acres in total area. Auxiliary Refuge Projects decreased in number from 16 to 13 and in area from 19,135 to 17,709 acres. Game Propagation areas decreased in number from 210 to 139 and in area from 42,521.09 to 31,194.89 acres. Dog Training Preserves

had a decrease of one unit, reducing the total area from 5,285.3 to 5,221.0 acres. Special Areas increased in number from 51 to 54 and in area from 14,410 to 14,620 acres.

The total area of all game management projects, including those on lands owned by the Commission as well as those on land owned by others, and including refuges in State Forests and all other public lands, decreased slightly from 2,051,753.86 to 2,034,240.46 acres.



LAND MANAGEMENT

Acreage of Game Lands

<i>Date</i>	<i>Acres</i>
May 31, 1921	23,135.55
May 31, 1925	86,019.27
May 31, 1930	173,551.40
May 31, 1935	465,421.97
May 31, 1940	636,680.88
May 31, 1945	781,616.28
May 31, 1950	880,437.71
May 31, 1955	906,137.78
May 31, 1958	922,722.87

3-1

MAY 31, 1958

PENNSYLVANIA GAME COMMISSION
DIVISION OF LAND MANAGEMENT
LAND TITLES AND RECORDS SECTION

CLASSIFICATION	NUMBER OF UNITS	TOTAL AREA (ACRES)	AREA CLOSED TO HUNTING						ACREAGE OPEN TO HUNTING
			REFUGES		PROPAGATION		SAFETY ZONES		
			NO.	ACRES	NO.	ACRES	NO.	ACRES	
State Game Lands	206	922,722.87	99	25,649					897,073.87
Primary Refuges on State Forests, etc.	33	18,924.00	33	18,924					(A)
State Game Farms	6	3,188.70			6	3,188.70			None
Cooperative Farm-Game Projects Comprise 9,971 Farms	165	1,029,325.00	600	5,981			10,443	167,900	855,444.00
Auxiliary Projects General Classification	13	17,709.00	12	3,595					14,114.00
Game Propagation Areas	139	31,194.89			139	31,194.89			None
Dog Training Preserves	7	5,221.00							Restricted
Special Areas	54	14,620.00							None
TOTALS	623	2,042,905.46 Deduct 8,665.00 (B) 2,034,240.46 (C)	744	54,149	145	34,383.59	10,443	167,900	1,766,631.87
Special Wildlife Refuge Projects (leased by Sportsmen's Organ- izations.)	90	29,692	104	3,133½			177	1,976	24,583½

(A) About 1,869,448 acres of State Forests on which refuges are located are open to public hunting.

(B) Forty Special Areas, totalling 8,665.00 acres, are located on State Game Lands.

This acreage deducted to eliminate duplication.

(C) 83% open to public hunting with firearms.

SPECIAL PRESERVES

PENNSYLVANIA GAME COMMISSION
DIVISION OF LAND MANAGEMENT
LAND TITLES AND RECORDS UNIT

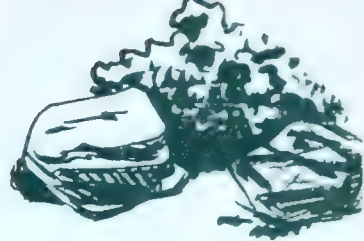
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MAY 31, 1958

DOG TRAINING PRESERVES

SERIAL NUMBER	LOCATION		OWNER OF LAND	AGREEMENT		ACRES	CLASS OF DOGS WHICH MAY BE TRAINED	HUNTING LIMITATIONS
	COUNTY	TOWNSHIP		DATED	TERM			
3	Lycoming (Near Haneyville)	McHenry	Dept. of Forest & Waters, Tia- daghton State Forest	5-4-39	Effective until cancelled on 30 days notice	800	All classes of hunting dogs. Field trials may be conducted.	No small game may be hunted or killed. Deer and bears may be killed in season.
6	Washington	North Franklin	Citizens Water Co., Washington, Pa.	5-6-41	1 yr. & thereafter until cancelled	578	All classes of dogs. Field trials may be conducted.	No game of any kind may be hunted or killed.
7 (Black Grouse Trial Area)	Lycoming	Brown (Near Pump Station)	Tiadaghton State Forest	9-1-45 App. by Commission 6-28-45	Until abandoned	715	All classes of dogs, but especially grouse dogs. Field trials may be conducted.	No small game may be hunted or killed. Deer and bears may be killed in season.
8	Forest	Jenks	Allegheny National Forest	12-2-47 App. by Commission 1-8-48	1 yr. & thereafter until cancelled	1,000	Bird dogs only. Field trials may be conducted.	No small game may be hunted or killed. Deer and bears may be killed in season.
9	Forest	Jenks	Allegheny National Forest	12-2-47 App. by Commission 1-8-48	1 yr. & thereafter until cancelled	1,000	Bird dogs only. Field trials may be conducted.	No small game may be hunted or killed. Deer and bears may be killed in season.
10	Forest	Jenks Barnett Millstone	Allegheny National Forest	10-29-48 App. by Commission 7-1-48	1 yr. & thereafter until cancelled	1,000	Bird dogs only. Field trials may be conducted.	No small game may be hunted or killed. Deer and bears may be killed in season.
12	Bucks	Solebury	Arthur R. & Virginia Eakin	10-29-52 App. by Commission 10-1-52	5 yrs. with renewal rights.	128	Solely for training spaniels and non-slip retrievers.	No small game may be hunted or killed. Deer and bear may be killed in season.
7	TOTAL					5,221.0		

DIVISION OF MINERALS



Under the Game Law the Commission has authority to advertise, execute supervise Oil and Gas Leases, and to utilize or sell minerals and other products from State Game Lands.

Oil and Gas Royalties and Rentals

Three Oil and Gas Leases, granted prior to this biennium, and three new leases, executed or acquired since June 1, 1956, are listed as follows:

Tract 34-A—600 Acres-Devonian Gas & Oil Co., Pittsburgh, Pa.

Tract 34-B—600 Acres-Devonian Gas & Oil Co., Pittsburgh, Pa.

Tract 34-C—600 Acres-Manufacturers Lt. & Ht. Co., Pittsburgh, Pa.

Tract 42—2,507 Acres-Felmont Oil Corp., Bradford, Pa.

Tract 42-B—971.5 Acres-Eberly & Snee, Uniontown, Pa.

Tract 93—159 Acres-N. Y. Natural Gas Corp., Pittsburgh, Pa.

Twelve wells had previously been drilled on the first three tracts. During this period one well was drilled on Tract 42 and two were completed on Tract 93.

By the close of the biennium it was necessary to plug and abandon all but four gas wells, two on Tract 34-A, one on 34-C, and one on Tract 93.

Records indicate that 1,127,067,000 cubic feet of natural gas was marketed. Royalties and land rental payments from

these Oil and Gas Leases resulted in an income of \$142,317.66, which was deposited in the Game Fund.

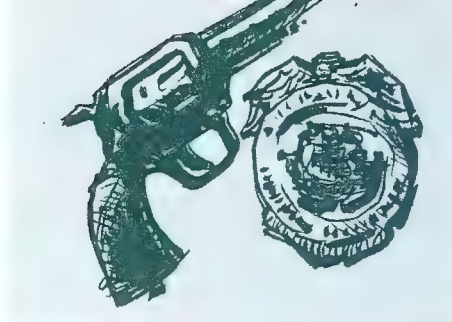
Receipts from royalties on natural gas production, land rentals and checks forfeited for Oil and Gas leasing since 1953 total \$1,010,703.53. This income has been set aside by the Commission for purchase of additional State Game Lands and field division headquarter buildings.

Coal Royalties—State Game Lands

Eight permits or leases for open-pit coal mining were in effect during the period, resulting in an income to the Commission of \$78,650.73, received as surface damage royalties for the removal of 650,178.93 tons of coal.



LAW ENFORCEMENT DIVISION



The Game Law Enforcement Program continued the adopted practice of emphasizing prosecution of more flagrant and serious violations. That this practice is paying off is clearly indicated by the fact that the number of apprehensions and

the amount of cash penalties collected increased. Cases of questionable or more technical description have been eliminated or tempered with an admonition or warning instead of arrest.

Ten-Year Summary		
<i>Fiscal Year</i>	<i>No. of Prosecutions</i>	<i>Penalties Collected</i>
1948-1949	4,825	\$148,925.80
1949-1950	6,107	200,888.35
1950-1951	4,249	136,844.21
1951-1952	4,628	146,497.25
1952-1953	5,041	161,735.01
1953-1954	5,109	160,911.75
1954-1955	3,955	113,445.00
1955-1956	3,122	109,346.00
1956-1957	3,448	123,771.55
1957-1958	4,690	166,145.50

Hunting License Revocations

A revised plan for measuring the seriousness of an offense with a view to revocation of hunting licenses was adopted,

and is now operating with the greatest possible fairness and equality to all concerned.

Licenses Revoked from Conviction

Hunters' Licenses revoked in 1956-1957 (Convictions) 946.

Hunters' Licenses revoked in 1957-1958 (Convictions) 1,436.

Referees' Hearings

Under the provisions of the Game Law referees appointed by the Director may hear testimony in hunting accidents to determine the degree of carelessness or negligence if such exists.

Based upon the referees' recommendations the Commission may act to revoke hunting and trapping privileges for specified periods. Following are the results of these hearings:

1956-1957		1957-1958	
Number of Hearings	66	Number of Hearings	90
Hunting Rights Denied by Hearings	50	Hunting Rights Denied by Hearings	71
Defendants Discharged ...	16	Defendants Discharged	19

License Revocations by Courts
of Quarter Sessions

Misdemeanors under the Game Law includes shooting at, wounding or killing a human being in mistake for game. Such cases are disposed of before

the Courts of Quarter Sessions and usually result in loss of hunting and trapping privileges as the court may decree.

Year	No of Revocations
1956-1957	14
1957-1958	8

Special Permits

Numerous special permits are issued as measures of control. Gratis permits are issued only to educational or governmental institutions.

Kind of Permit	No.	Fee	No.	Fee
	1956-1957		1957-1958	
Collecting	29 (8 gratis)	\$ 145	27 (9 gratis)	\$ 90
Dog Training	226	2,260	229	2,290
Ferret Breeders	1	25	1	25
Ferret Owners	2	25	3	35
Field Trial	110	550	32	160
Fox Hunting	19	950	19	950
Fur Dealers—Resident .	242	2,420	221	2,210
Fur Dealers—Employes	17	85	10	50
Fur Dealers—Non. Res.	8	800	7	700
Fur Farming	430	2,150	443	2,165
Game Propagation	434	2,170	433	2,215
Regulated Shooting Grounds	116	5,270	133	6,020
Retriever Trials	6	100	5	80
Roadside Menagerie ..	57	285	59	295
Taxidermy	129	3,225	133	3,325
To Mount & Possess Pro- tected Specimens ..	249 (30 gratis)	249	253 (36 gratis)	207
Totals	2,075 (38 gratis)	\$ 20,709	2,008 (45 gratis)	\$ 20,817



BEAR DAMAGE

Marauding bears often encroach upon civilization and destroy beehives, poultry and livestock. The Game Law provides

for damage payment up to \$5,000 per year on lands open to public hunting.

Bear Damage for Ten Year Period

	No. of Claims	Bees	Sheep	Pigs	Calves	Goats	Horse	Fowl	Rabbits	Amount Paid
1948-1949	97	157	30	10	1	2	...	...	...	\$ 2,947.32
1949-1950										
1950-1951	74	151	17	4	1	...	...	50	4	2,517.28
1951-1952										
1952-1953	170	484	38	5	2	...	...	...	...	7,264.75
1953-1954										
1954-1955	100	142	22	8	3	1	...	...	...	3,363.21
1955-1956										
1956-1957	66	153	3	1	...	...	1	1	...	2,434.22
1957-1958										

The Commission entered into agreements with thirteen (13) landowners to provide 3,680 rods of deer proof fencing and 561 lbs. of staples to protect their orchards, nurseries, or farm crops from depredations by deer. Under the terms of these agreements the property

owners must furnish the posts, labor, and erect and maintain the fence. The Commission pays the cost of the fencing and the staples.

The cost to the Commission for the above furnished fencing was \$9,995.

Deer Killed to Protect Property

Deer numbers have continued to increase in some agricultural areas. This has presented a damage problem and under certain circumstances farmers,

nurserymen and orchardists have exercised their lawful prerogative and killed animals inflicting damage.

Year	No. Reported Killed
1956-1957	1931 in 54 counties
1957-1958	2345 in 55 counties

TAXIDERMY EXAMINATION



Pennsylvania hunters have been assured of better taxidermy work on their trophies since 1937, when a taxidermy applicant was first required to pass an examination of fitness before a Taxidermy Examining Board. This board, consisting of three members selected from three of the State's outstanding scientific institutions and museums, holds examinations annually.

Year	Successful Applicants
1956	2
1957	8

New Equipment for Field Officers

All Game Protectors were fully equipped with a new summer weight uniform consisting of two pairs of light weight forest green trousers, one Eisenhower type jacket, two suntan poplin dress shirts, black ties, Stetson Sierra style nutria color hat and Russell Bird Shooter Field boots. Dress uniforms were replaced and new black Endicott Johnson dress shoes, new light-weight ventilated raincoats and new snake bite kits were supplied all officers, along with ammunition for predator control.

Marine Equipment

Due to the great increase of all types of watercraft and out-board motors on our rivers, streams and lakes the Commission approved the purchase of new boats, motors, canoes and accessories so field officers can maintain proper patrol of our waterways during hunting and trapping seasons. All Commis-

sion owned craft must be equipped fully with approved coast guard buoyant safety cushions, vests, lights and equipment.

Electronic Predator Callers

With the advent of transistors in the manufacture of wildlife callers, making them light and portable, the Commission is exploring the value of them as a means of controlling predators. Preliminary reports indicate they may have great value in this field. Two callers are on order and will be thoroughly tested under all conditions.

Public Instructions in Predator Control

An increase in predators influenced more requests for trapping instructions from farmers, ranchers and conservation-minded individuals. The Supervisor of the Predator Control Section instructed 2121 persons in the art and technique of predator control and appeared on television on three different occasions to promote this program. District Game Protectors held 296 classes and instructed 2711 individuals in this phase of Commission work.



Predators Killed by Game Protectors

Campaigns waged on predators by salaried officers resulted in the destruction of predatory species as follows:

Red Fox	1,688
Gray Fox	720
Weasels	292
Skunks	2,284
Raccoons	2,817
Opossums	5,235
Dogs	2,677
Cats	4,685
Great-Horned Owls	307
Snowy Owls	6
Goshawks	61
Cooper's Hawks	665
Sharp-Shinned Hawks	326
Crows	19,847
Other Birds	948

Fur Harvest

Market prices for raw furs during the past few years have continued at a comparatively low level, therefore the take

has not been as high as expected. Fair market prices prevailed for mink and beaver pelts of good quality.

Raw Furs Sold During the Season of 1955-1956

<i>Species</i>	<i>Bounty Payments</i>	<i>No. of Pelts Sold</i>	<i>Total Value</i>
Muskrats	\$	462,987	\$585,265.65
Skunks .....	.....	11,034	8,342.39
Mink .....	.....	7,669	111,040.30
Opossum .....	.....	9,284	1,186.78
Beavers .....	.....	2,973	24,735.36
Otters .....	.....	.....	.....
Raccoons .....	.....	50,978	71,948.17
Weasels .....	.....	11,065	12,948.17
Red Foxes	15,915	1,746	196.07
Gray Foxes	11,323	1,593	250.65
Wild Cats .....	.....	2	.50
Totals	\$27,238	559,331	\$815,914.24

Raw Furs Sold During the Season of 1956-1957

Species	Bounty Payments	No. of Pelts Sold	Total Value
Muskrats	\$	609,639	\$554,346.52
Skunks .....	.....	9,896	8,340.12
Mink .....	.....	7,792	55,864.70
Opossum .....	.....	6,103	923.08
Beavers .....	.....	3,864	29,926.70
Otters* .....	.....	8*	200.00
Raccoons .....	.....	52,000	56,041.56
Weasels .....	.....	6,420	5,181.65
Red Foxes	17,849	1,551	213.95
Gray Foxes	11,816	1,108	127.65
Wild Cats .....	.....	.....	.....
Totals	\$29,665	698,381	\$711,165.93

*Otter pelts purchased in Virginia.

Bounty Section

Under the law bounty may
be paid from the Game Fund
upon certain predatory species

after being processed through
the Bounty Section.

Bounties for Period from June 1, 1956 to and Including May 31, 1957

1. Gray Fox\$4.00 for each gray fox
2. Red Fox\$4.00 for each red fox
3. Great-horned Owl\$5.00 for each great-horned owl, except those
killed during the months of November and December.

Bounties Paid from June 1, 1956 to May 31, 1957

Total Claims	\$10,459
Gray Foxes	11,816
Red Foxes	17,849
Great-horned Owls	1,234
Total Amount Expended	\$124,830

Bounties for Period from June 1, 1957 to and Including May 31, 1958

1. Gray Fox\$4.00 for each gray fox
2. Red Fox\$4.00 for each red fox
3. Great-horned Owl\$5.00 for each great-horned owl, except those
killed during the months of November and December.

Bounties Paid from June 1, 1957 to May 31, 1958

Total Claims	\$9,892
Gray Foxes	11,006
Red Foxes	18,125
Great-horned Owls	1,115
Total Amount Expended	\$122,099

Claims Investigated

There were 289 claims forwarded to the Division Supervisors to be investigated for possible fraud which resulted in the collection of \$1,615.00.

Bounty also was refused for

the killing of 240 gray foxes, 333 red foxes and 14 great-horned owls because the claims were outdated by the provisions of the Game Law or were improperly presented.



DIVISION OF PROPAGATION

Game Farm Operations

In an effort to further increase wild turkeys within the wide scope of their range, the wild turkey farm was operated at full capacity. There was an increase in the production of bobwhite quail but a slight decrease in the production of pheasants. The Southwest Hatchery at Distant was established as the Southwest Game Farm in 1957, with facilities to handle about 15,000 pheasant chicks.



State Game Farm Production Record

	Calendar Years 1956 — 1957	
Ringneck Pheasants		
Total number of eggs produced	519,405	507,065
Total number of eggs shipped	506	39,100
Total number of day-old chicks to sportsmen	233,759	234,356
Total number of mature birds for release	79,985	74,285
Bobwhite Quail		
Total number of eggs produced	58,000	58,000
Total number of eggs shipped to sportsmen	21,490	19,880
Total number of day-old chicks shipped to sportsmen	5,475	9,311
Total number of 12 week old birds shipped for release	7,778	10,304
Total number of mature birds shipped for release ...	7,109	4,930
Wild Turkeys		
Total number of eggs produced	15,644	17,012
Total number of eggs shipped	200	2,486
Total number of poults shipped	1,060	240
Total number of 12-18 week old birds shipped for release	2,946	3,462
Total number of mature birds shipped for release	2,885	2,863

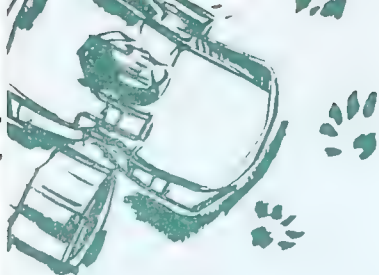
Game Purchases

The pheasant purchase program of securing 15 week old birds in October was continued. All birds were obtained from

Pennsylvania breeders, except for 4,472 that were brought from Wisconsin Game Farms.

	Number		Average	Number		Average
	1956-1957	Cost	Cost	1957-1958		Cost
Ringneck Pheasants	28,260	\$51,761.22	\$1.83	41,672	\$78,598.80	\$1.89
Ringneck Pheasants	595	*	..	400	*	..
Canada Geese	43	215.00	5.00	96	480.00	5.00
Mallard Ducklings	5,200	1,820.00	.35	4,600	1,610.00	.35
Snowshoe Hares .....	..	..	..	135	641.25	4.75

* Received in exchange for pheasant chicks.



FUR HARVEST

Under this profitable program surplus rabbits from city watersheds, public parks, privately owned lands, and other areas suffering rabbit damage are trapped and transferred to lands open to public hunting. During the 30 day game trapping seasons each winter 115,503 cottontails were caught and released on public hunting domain.

		<i>Fiscal Year</i> 1956-1957	<i>Fiscal Year</i> 1957-1958
Cottontail Rabbits		59,642	55,816
Ringneck Pheasants		498	2,194



Total Game Released 1956-1957

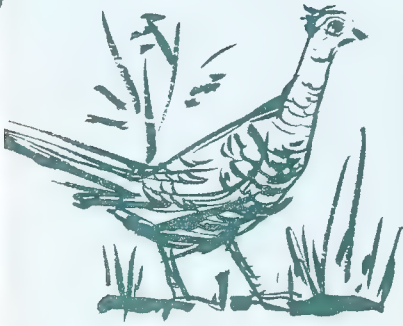
	<i>Game Farms</i>	<i>Purchases</i>	<i>Trapped & Farm-Game Transferred</i>	<i>Cooperators</i>	<i>Total</i>
Cottontail Rabbits			59,642		59,642
Ringneck Pheasants	76,046	28,855	498	133,167	238,566
Bobwhite Quail	12,428				12,428
Wild Turkeys	5,809				5,809
Wild Ducks	2,369	5,200			7,569
Canada Geese	61	43			104

Total Game Released 1957-1958

	<i>Game Farms</i>	<i>Purchases</i>	<i>Trapped & Farm-Game Transferred Cooperators</i>		<i>Total</i>
Cottontail Rabbits			55,861		55,861
Ringneck Pheasants	56,493	42,072	2,194	135,399	236,158
Bobwhite Quail	13,736				13,736
Wild Turkeys	6,595				6,595
Canada Geese	129	96			225
Snowshoe Hares		135			135
Wild Ducks	3,508	4,600			8,108

The releasing to 5-week old mallards was continued. In addition to those purchased, the Wild Waterfowl Farm produced ducklings from 300 breeders held in open pens at Pymatuning Lake to which wild drakes have access. This practice supplies the very best stock which can be obtained.





Pheasant Holding Fields

Pheasant cockbirds raised by farm-game co-operators, rabbit farm co-operators and farmers whose lands are open to public hunting are placed in holding fields at 12 weeks of age for liberation in October and November. The hens are liberated at 12 weeks of age.

Turkey Hardening Pens

Instead of releasing young turkey toms direct from the Game Farm, they are placed in hardening pens in each of the six field divisions. After being acclimated for six to eight weeks they are then liberated throughout the Commonwealth.



Day-old Pheasant Chick Program

The pheasant chick program was expended over the previous biennium. In 1956, 233,759 chicks were distributed of which 56,101 were raised and liberated by sportsmens' clubs and 135,399 by farmers. Slightly over 81% of the birds were released.

From all sources, a total of 586,719 pheasants were released—the highest number ever liberated by the Commission.



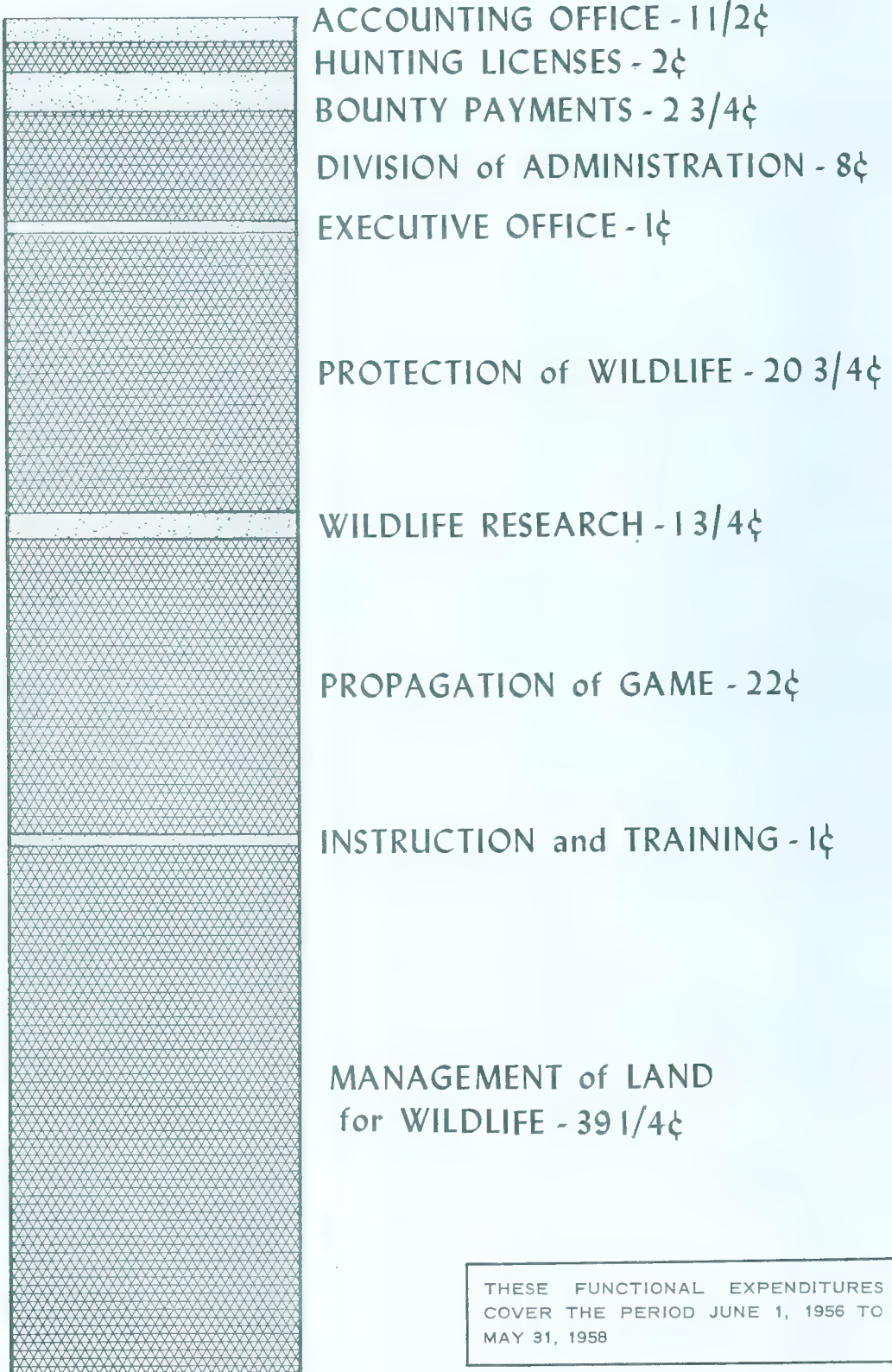
STATE GAME LANDS
ACREAGE WITHIN RESPECTIVE COUNTIES

PENNSYLVANIA GAME COMMISSION
DIVISION OF LAND MANAGEMENT
LAND TITLES AND RECORDS SECTION

3-4
MAY 31, 1958

COUNTIES	TOTAL ACQUIRED TO MAY 31, 1957	ACQUIRED DURING FISCAL YEAR 1957-1958	TOTAL ACQUIRED TO MAY 31, 1958	NUMBER OF TOWNSHIPS
Allegheny	1,311.6		1,311.6	3
Armstrong	2,416.8	- 190.0	2,226.8	3
Beaver	1,421.8		1,421.8	5
Bedford	38,210.35		38,210.35	15
Berks	9,205.14		9,205.14	12
Blair	18,840.94	483.6	19,324.54	9
Bradford	42,471.94		42,471.94	13
Bucks	3,920.8	58.2	3,979.0	6
Butler	2,747.2	2.7	2,749.9	4
Cambria	20,633.41		20,633.41	10
Cameron	12,762.7		12,762.7	2
Carbon	25,413.63		25,413.63	5
Centre	46,635.4		46,635.4	13
Chester	926.7		926.7	1
Clarion	12,141.9		12,141.9	8
Clearfield	24,786.09		24,786.09	12
Clinton	10,571.2		10,571.2	2
Columbia	13,467.4	1,127.8	14,595.2	11
Crawford	14,696.5	- 63.0	14,633.5	15
Cumberland	1,076.2	786.4	1,862.6	4
Dauphin	27,278.4		27,278.4	5
Elk	63,896.1		63,896.1	8
Erie	8,373.5	480.4	8,853.9	11
Fayette	10,371.9		10,371.9	4
Forest	7,056.9		7,056.9	2
Franklin	6,967.6		6,967.6	5
Fulton	14,793.3		14,793.3	8
Greene	3,005.0	2,323.7	5,328.7	4
Huntingdon	17,653.2		17,653.2	19
Indiana	4,510.2		4,510.2	4
Jefferson	24,459.86		24,459.86	8
Juniata	6,828.5		6,828.5	6
Lackawanna	4,307.9		4,307.9	3
Lancaster	5,183.71		5,183.71	6
Lawrence	2,023.9		2,023.9	6
Lebanon	19,867.85	296.8	20,164.65	7
Lehigh	2,483.33		2,483.33	3
Luzerne	32,597.3	185.1	32,782.4	15
Lycoming	37,193.3		37,193.3	9
McKean	20,633.93		20,633.93	3
Mercer	965.6		965.6	2
Mifflin	2,528.8		2,528.8	4
Monroe	31,678.6	93.4	31,772.0	8
Montour	227.5		227.5	1
Northampton	1,401.1		1,401.1	2
Northumberland	9,385.6		9,385.6	11
Perry	4,996.4		4,996.4	4
Pike	12,599.5		12,599.5	6
Potter	17,667.1		17,667.1	7
Schuylkill	10,888.4	2,722.1	13,610.5	11
Snyder	2,185.1		2,185.1	5
Somerset	12,698.3	492.5	13,190.8	10
Sullivan	48,853.4		48,853.4	7
Susquehanna	12,012.1		12,012.1	6
Tioga	20,530.7		20,530.7	7
Union	565.1		565.1	2
Venango	16,494.28	68.1	16,562.38	11
Warren	31,959.51		31,959.51	7
Washington	2,975.6		2,975.6	2
Wayne	10,396.8		10,396.8	4
Westmoreland	10,254.8		10,254.8	3
Wyoming	28,123.3		28,123.3	3
York	1,324.1		1,324.1	2
63 Counties	913,855.07	8,867.8	922,722.87	414

HOW THE GAME FUND DOLLAR WAS SPENT



Earmarked Funds

Under the provisions of the Game Law, as amended by Act 271, Session of 1949, not less than \$1.25 from each Resident Hunter's Licenses fee shall be used for improving and maintaining natural wildlife habitat on land that is available for public hunting; the purchase, maintenance, operation, rental and storage of equipment used in this work; the purchase, distribution, planting, cultivating and harvesting of game foods; the purchase, trapping and distribution of all species of game, as well as providing protection to the property of Farm-Game Cooperators.

This program has been in operation for nine (9) years. During the nine (9) year period the Commission spent \$1,103,332.30 in excess of the minimum requirements.

Act 632, Session of 1955 provides that the sum of one dollar (\$1.00) of the one dollar and fifteen cents (\$1.15) fee collected for issuing resident and non-resident hunters' licenses and tags for antlerless deer, shall be used solely for cutting or otherwise removing overshadowing tree growth, to produce underbrush sprouts and saplings for deer food and cover on game land.

The schedules below show the expenditure of funds in compliance with the above stated acts.

Receipts and Expenditures

Act #271, 1949

<i>License Year</i>	<i>Resident Licenses Sold</i>	<i>Minimum to be Expended</i>	<i>Expended Fiscal Year Ended May 31</i>	<i>Over (*) or Under (—) Minimum</i>	<i>Cumulative Over (*) or Under (—)</i>
1949	810,059	\$1,012,573.75	\$1,012,465.96 (A) 1950	\$ 107.79—	\$ 107.79—
1950	801,948	1,002,435.00	1,266,856.18 1951	264,421.18*	264,313.39*
1951	810,349	1,012,936.25	1,095,938.26 1952	83,002.10*	347,315.40*
1952	830,147	1,037,683.75	1,163,287.09 1953	125,603.34*	472,918.74*
1953	859,137	1,073,921.25	1,247,584.35 1954	173,663.19*	646,581.84*
1954	868,577	1,085,721.25	1,215,545.03 1955	129,823.78*	776,405.62*
1955	897,776	1,122,220.00	1,150,865.08 1956	28,645.80*	805,050.70*
1956	901,775	1,127,218.75	1,280,927.58 1957	153,708.83*	958,759.53*
1957	934,065 (B)	1,167,581.25	1,312,154.02 1958	144,572.77*	1,103,332.30*

(A) Expenditures from September 1, 1949 (effective date of act) to May 31, 1950.

(B) Estimated License Sales.

Receipts and Expenditures

Act #632, 1955

<i>License Year</i>	<i>Antlerless Deer Licenses Sold</i>	<i>Minimum to be Expended</i>	<i>Expended Fiscal Year Ended May 31</i>	<i>Over (*) or Under (—) Minimum</i>	<i>Cumulative Over (*) or Under (—)</i>
1957	334,683	\$334,683.00	\$104,218.85 1958	\$230,464.15—	\$230,464.15—

SCHEDULE IV
PENNSYLVANIA GAME COMMISSION
STATEMENT OF REVENUE, EXPENDITURES AND CASH BALANCES
JUNE 1, 1956 TO MAY 31, 1958

REVENUE

Cash in State Treasury to credit of "Game Fund" June 1, 1956.....	\$ 3,746,250.73
Less: Unpaid Vouchers in Fiscal Offices as of May 31, 1956.....	37,434.99
Net Cash Available for Expenditure as of June 1, 1956.....	\$ 3,708,815.74
Receipts June 1, 1956 to May 31, 1958:	
Resident Hunters' Licenses.....	\$ 5,510,332.16
Non-Resident Hunters' Licenses.....	1,494,776.44
Antlerless Deer Licenses.....	324,500.00
Archery Licenses.....	163,553.10
Non-Resident Tripping Licenses.....	500.00
Special 3-day Non-Resident Regulated Shooting Ground Licenses.....	15,349.70
Special Game Permits.....	43,836.00
Game Law Fines.....	292,837.71
Interest on Deposits.....	31,186.09
Sale of Skins and Cars.....	17,190.80
Sale of Unserviceable Property (Growth Property and Supplies).....	4,910.42
Miscellaneous.....	69,403.67
Rental of State Property.....	46,715.81
Sale of Wood Products.....	523,956.03
Contributions from Federal Government.....	1,185,008.01
Sale of Publications.....	91,046.15
Interest on Securities.....	158,283.57
Leased Land Act 43 - 1955 Session.....	5,220.70
Ground Rentals and Royalties from as.....	142,317.06
Coal and Clay Royalties.....	80,011.27
Total Receipts from All Sources.....	10,207,136.77
Total Funds Available During the Period.....	\$13,916,102.51

CLASSIFICATION OF EXPENDITURES BY ORGANIZATIONAL UNITS

	Exec. Office and Accounting	Division of Administration	Conservation School (Instruction and Training)	Division of Propagation	Division of Research	Division of Law Enforcement	Division of Land Management	Total
Classification of Expenditures								
Salaries.....	\$163,642.55	\$309,154.80	\$36,355.95	\$ 355,956.98	\$ 75,922.66	\$11,009,982.20	\$ 645,053.27	\$2,599,018.35
Wages.....	17,534.00	20,571.69	12,395.06	376,001.13	6,680.01	194,713.63	980,287.13	1,608,183.25
Printing and Stationery.....	2,445.85	154,871.48	109.92	108.61	196.63	28,878.57	5,895.82	192,506.68
Food and Forage.....	-0-	186.08	7,113.72	256,094.14	-0-	898.53	112,955.27	371,540.74
Materials and Supplies.....	2,410.39	26,089.50	3,240.21	755,755.17	5,512.23	41,308.17	425,001.97	1,239,315.44
Fees and Professional Services.....	-0-	43,451.61	945.96	64.00	-0-	8,730.16	43,764.74	101,956.47
Traveling Expenses.....	15,808.09	43,134.47	13,125.80	60,242.45	21,443.17	320,622.80	161,557.08	996,155.82
Motor Vehicle Supplies.....	980.31	2,334.82	1,802.98	31,519.51	73.32	9,794.59	86,511.62	132,216.95
Postage.....	-0-	35,265.74	17.66	1,442.60	135.38	5,084.36	4,400.82	46,346.56
Telephone and Telegraph.....	2,605.53	3,043.53	1,085.93	10,945.78	1,204.10	18,566.58	26,543.63	64,033.13
Newspaper Advertising.....	-0-	-0-	-0-	-0-	-0-	18,558.69	3,846.33	22,405.02
Light, Heat, Power and Fuel.....	-0-	1,591.89	2,830.73	19,959.08	-0-	1,102.80	3,021.99	28,513.49
Contracted Repairs.....	104.63	1,245.57	2,774.27	8,221.97	10.75	610.82	40,828.84	53,857.05
Rent of Real Estate.....	-0-	1,959.94	-0-	3,506.22	10.75	5,989.07	14,298.11	25,763.34
Rent of Equipment.....	17,904.50	1,006.13	37.50	11,073.30	1,716.70	1,414.38	25,346.51	58,493.02
Insurance.....	1,358.35	2,114.41	22.27	5,337.45	472.36	6,760.90	21,122.12	37,187.86
Other Maintenance Services.....	1,547.30	12,583.07	1,094.06	1,343.50	56.08	12,175.69	6,155.40	35,430.58
Motor Vehicles.....	-0-	-0-	-0-	1,272.00	-0-	-0-	141,857.18	153,633.77
Equipment and Machinery.....	2,001.95	11,057.53	1,358.31	16,817.61	332.40	8,573.43	73,948.60	119,139.63
Land.....	-0-	-0-	-0-	-0-	-0-	-0-	310,608.58	310,608.58
Buildings and Structures.....	-0-	3,217.17	-0-	7,383.93	-0-	7,732.05	80,136.16	94,469.51
Non Structural Improvements.....	-0-	-0-	-0-	6,624.49	-0-	-0-	-0-	6,624.48
Grants and Subsidies.....	-0-	-0-	-0-	-0-	24,000.00	-0-	-0-	24,000.00
Misc. Awards, Bounties, Gratuities.....	-0-	8,785.00	-0-	-0-	-0-	252,507.02	-0-	261,292.02
Fixed Charges.....	-0-	-0-	-0-	529.57	-0-	-0-	158,398.20	158,927.77
Refunds of Receipts.....	1,029.15	-0-	-0-	-0-	-0-	-0-	-0-	1,029.15
TOTAL EXPENDITURES BY GAME COMMISSION.....	\$229,403.50	\$688,153.72	\$83,890.33	\$1,918,740.26	\$140,805.71	\$2,014,214.24	\$3,376,235.90	\$8,451,446.66

Plus: Expenditures by Other State Departments	
Department of Revenue - Printing Hunting License Tags and Miscellaneous Forms (*)	\$ 183,577.15
Department of State - Contributions to State Employees Retirement System (*)	225,946.50
Department of Labor and Industry - Contributions to Social Security (*)	73,500.00
Department of Treasury - Replacement Checks (*)	2.00

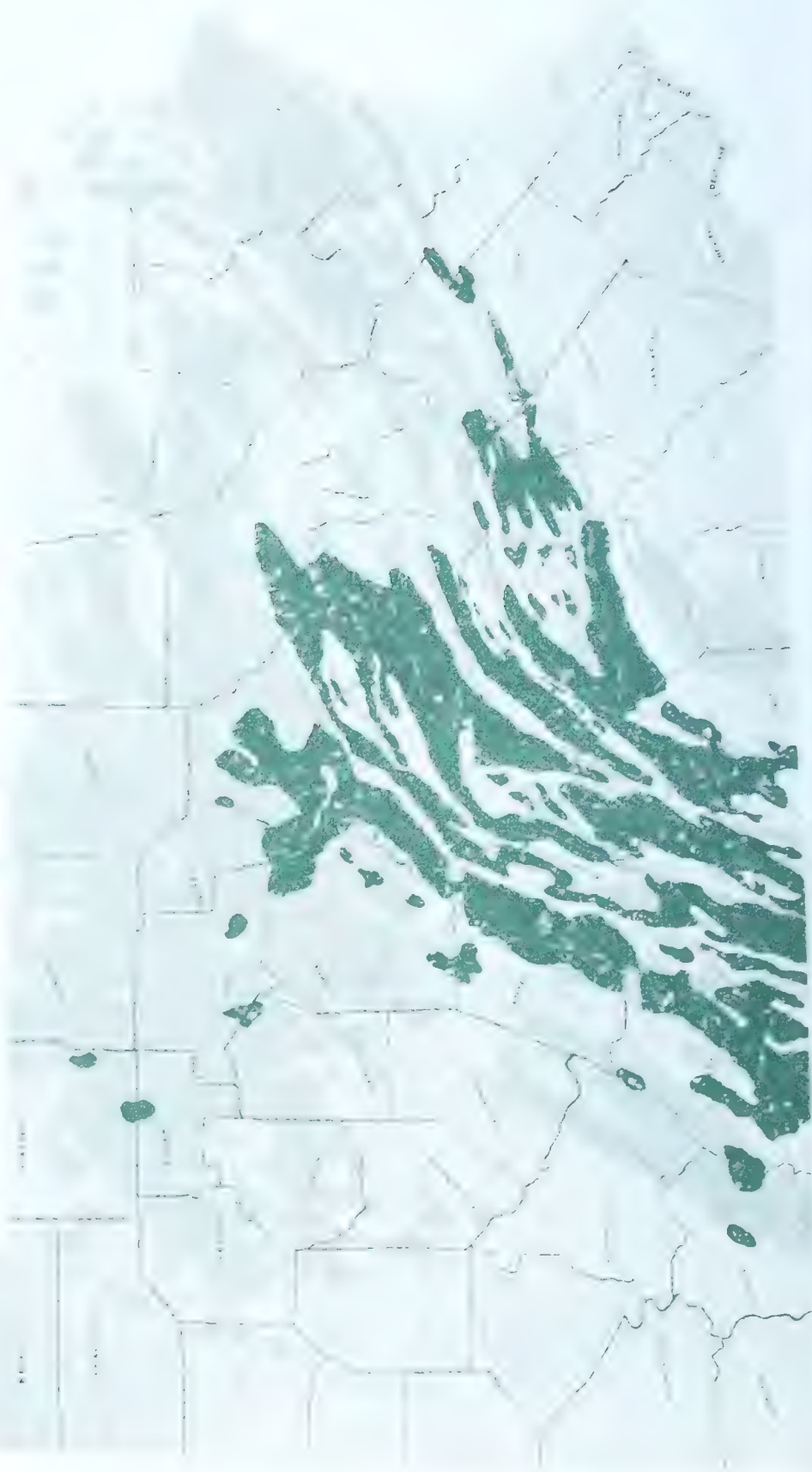
TOTAL EXPENDITURES

Cash Balance May 31, 1958 Available for Future Expenditure.....	\$ 8,934,479.31
Plus: Unpaid Vouchers in Fiscal Offices as of May 31, 1958 Amounting to.....	4,931,623.20
Cash Balance in State Treasury to Credit of "Game Fund" May 31, 1958 (Includes U. S. Securities in the amount of \$3,488,726.12).....	128,219.17

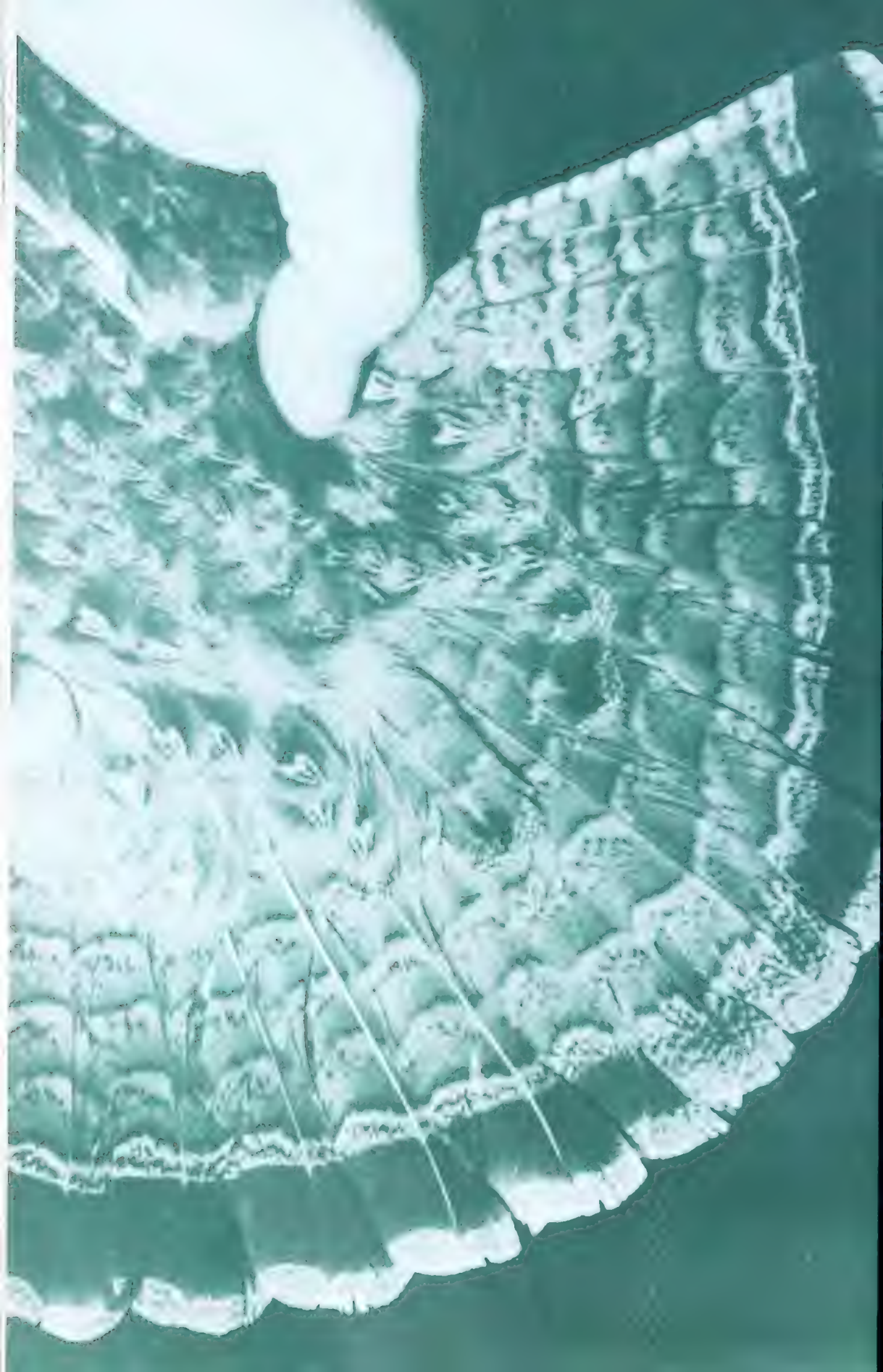
(*) These items are paid out of the "Game Fund" upon requisitions drawn by the Department of Revenue, Department of State, Department of Labor and Industry and the Department of the Treasury and are included to complete the picture of the "Game Fund" finances.

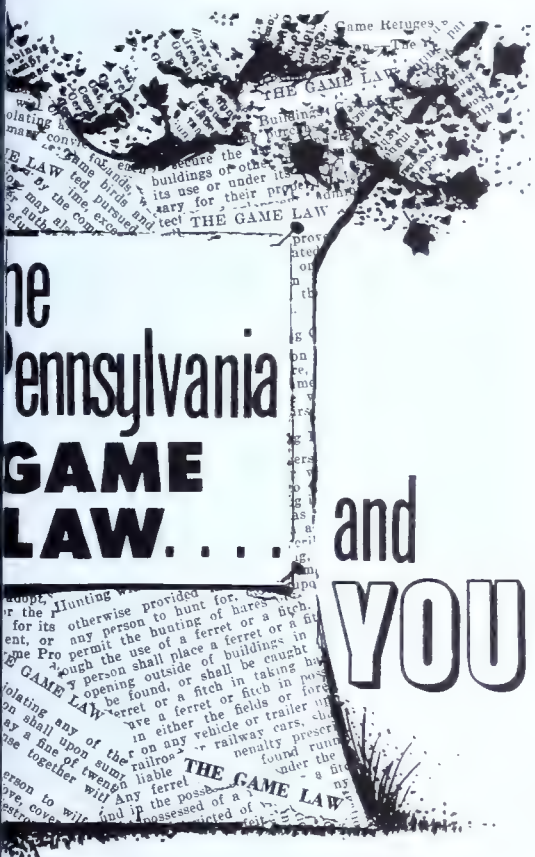
PENNSYLVANIA WILD TURKEY RANGE

1938 ■ 1958 □









law's requirements. Here it is, from Section 701:

"Except as otherwise provided in this Act, it is unlawful for any person to take or kill or wound, or attempt to take or kill or wound, any game except during the open season, or to have in possession, either living or dead, any game, or any part thereof, except game lawfully taken during the open season, which may be had in possession up to and including July first of the year immediately following."

If you have game in your possession after the end of the season you have the burden of proving that it was legally taken. You are permitted to have in possession game killed or taken outside of the State, or tanned or cured skins or parts of birds or animals lawfully killed. Possession of live raccoons is permitted when they are taken lawfully during open season, but sale of wild-caught raccoons for propagation is unlawful.

Ground Rules For Happy Hunting

FIVE OF A SERIES

By John Sullivan

Deputy Attorney General

THE general hunting regulations in the Pennsylvania Game Law cover twenty-seven closely printed pages. But don't let that worry you. Game protectors, in spite of what you may have heard, aren't spoilsports. They want you to have a good time. And the basic rules a hunter must observe in Penn's Woods are fairly simple.

If you will fix just one paragraph in your mind—a rather long and complicated paragraph, we'll admit—you will have the gist of the

You will be in trouble if you possess, conceal or use any illegal game, or help in its taking, possession, concealment or transportation. Hunting is verboten on Sunday, except for dog training or trials, and on other days between 5 P.M. and 7 A.M., except that raccoons may be taken at any time day or night during open season, and woodchucks or other game then in season may be hunted between 6 A.M. and 7:30 P.M. (Eastern Standard Time) between July 1 and September 30,

Sunday excepted. The Commission may fix any starting hour it wants on the opening days of the various seasons, and may adjust for Federal time changes. The only exception to the Sunday law is that raccoons and other furbearers may be removed from traps on that day if legally caught.

Those are the principal shalt nots. What then, can a hunter do? Here comes Section 703, which covers "Lawful methods of hunting." Listen carefully.

"It is lawful to hunt for, catch, take, wound or kill game of any kind only through the use of a gun, pistol, revolver, or bow and arrow, of a kind the use of which is not hereinafter prohibited, except . . ."

It's the exceptions, as usual, that cause all the trouble. Here they are:

Raccoons "may be killed or captured in any manner" including the use of lights ordinarily carried in the hand or on the person, but not with

automatic firearms, or shotguns with more than three shells, or snares, poisons, explosives or chemicals. They may not be smoked or dug out, or den trees cut.

Blinds and decoys may be used for waterfowl, as permitted by Federal regulations.

Section 703 also repeats in general terms the rules for trapping which are covered more fully in the section dealing with furbearers.

Game may be taken "in any manner" for scientific purposes under Commission permit.

Woodchucks may be dug out of dens in cultivated fields by farmers who are citizens, and killed in any manner at any time. Non-farmer citizens may dig them out of cultivated fields and kill them in any manner with permission of the farmer owner or occupant, and are required to replace and level off the earth.

Unlawful methods of hunting are specifically designated in Section 704. Such as shooting when the quarry

BIG GAME GUNS are a matter of personal preference but to be legal, they must propell one all-lead or lead alloy or soft-nosed or expanding bullet or ball, other than one fired from a .22 or .25 caliber rimfire cartridge. Automatic or semi-automatic rifles or shotguns are prohibited in hunting big game.



not plainly visible. Digging or smoking out the prey, except predators or woodchucks. Automatic firearms are prohibited, except semi-automatic shotguns may be used on small game, predators, and unprotected birds. So are shotguns with more than three shells, swivel guns, air rifles, and silencers. No hunting may be done from an automobile or vehicle or boat or craft of any kind propelled by any mechanical power. It is against the law to "set, lay or prepare for use or to use any bait, hay, grain, or other food, or any trap, snare, set-gun, net, bird-lime, deer-lick, pit-fall, turkey blind or turkey pen . . ." "Set-gun" is defined as any contrivance, device or firearm capable of discharging or projecting a deadly charge or missile, which is set to operate in the absence of the owner. Use of lights is prohibited, except that hand lights may be used in taking raccoons, opossums and skunks. Finally, all other hunting devices "not specifically permitted by this act" are outlawed.

There are additional rules applying to big game. It may be taken only with "a gun propelling one all-lead or lead alloy or soft-nosed or expanding bullet or ball, other than one fired from a .22 or .25 caliber rimfire cartridge, at a single discharge, or through the use of bow and arrow."

Spotlighting while in possession or control of a weapon is outlawed, except that it is not an offense if automobile headlights pick out big game on or adjacent to a highway while traversing the highway "in the usual way." Big game that has taken refuge in water may not be killed. Use of dogs is prohibited in hunting big game or wild turkeys. Hunting hares or rabbits with ferrets or fitches is unlawful.

Hunting from power boats or from any vehicle is forbidden, as is the use of any vehicle equipment (head-

lights, for instance) for the taking or transportation of game.

The limit on big game animals is one per hunter, and it is unlawful to participate in a hunt except as a driver after killing that one, or after the group together has taken the legal limit.

Hunters who have detached the head of a big game animal must be prepared to produce it immediately upon demand, or submit other evidence that it was legally killed, since the legal presumption is that a headless big game animal was illegally taken.

If five or more hunt big game in a party they must maintain a roster, one copy to be kept open for inspection for thirty days at headquarters and the other carried on the hunt captain's person. All members of a party are liable for excess game kills after they have had an opportunity to compare notes, but not later than the end of the hunting day. Any excess must be turned over to the nearest salaried Game Commission officer within eighteen hours. Hunting after the limit has been taken subjects every member of the party to penalties.

When a big game animal is killed it must be tagged before it is moved or within an hour. For licensed hunters the tag is that provided with the license, for others (farmers on their own lands, for instance, or persons who have lost the official tag) the tag should include name, address, license number if any, date, township and county. Within five days after the close of the season a similar tag or postcard is required to be sent to the Game Commission at Harrisburg, indicating the kind of animal, sex, dressed weight, and number of points if an antlered deer.

Failure to tag and report is unlawful, and if the specific responsible individual cannot be located all members of the party may be

held liable. Game being transported without tag is subject to seizure.

A guide may not kill game for an employer or give him game killed by the guide, nor may anyone kill game for hire, nor may an employer receive game from a guide he employs. This does not prevent a person from using his dogs on small game while serving as a guide, or from acting as a guide without weapons after he has killed his limit or participated in the killing of a camp limit of big game. Salaried Game Commission enforcement personnel may not act as guides for hunters.

The hunter who makes an illegal kill by mistake can keep out of serious trouble if he takes care to follow the rules, but it will still cost him money. If it is an animal, he should first remove the entrails. The carcass of the animal or bird should then be turned over to a representative of the Game Commission, together with a 'sworn statement of what happened. Sad to relate, he must also turn over at the same time, and within twenty-four hours of the

kill, one-fourth of the penalty imposed by law for the illegal killing. Still, it's a seventy-five percent saving. The penalty and report are then sent to the executive director of the Game Commission, who may accept the explanation or may order prosecution if he feels the incident occurred from negligence and carelessness rather than mistake.

It is unlawful to ship wild game by parcel post, except that skins of legally killed raccoons and bears may be so shipped if marked properly to show the contents. Exception is also made for trophies being shipped to taxidermists, but if they are sent outside the state a permit is required from the Game Commission.

In transporting small game the hunter must keep it with him and available for inspection no matter what means of conveyance he uses. If it is carried in baggage or boxed for shipment it must be plainly labeled with the owner's name and address, county where it was killed, and number of each species. Naturally, legal possession limits must be observed.

BIG GAME ANIMALS must be tagged before they are moved or within one hour of killing. For licensed hunters, a tag is provided with the license. Farmers who are permitted to hunt without a license under specified conditions should improvise a tag, giving name, address, date, township and county where animal was killed.





HUNTING ROSTER must be maintained if five or more hunters combine to hunt big game. One copy should be kept open for inspection for 30 days at the headquarters of the party; the other copy must be carried by the hunt captain.

Big game may be shipped without the owner accompanying it, but in all cases must be tagged with the owner's name, address and license number, as well as the name of the county where it was killed. If it is cut into parts each part must have a similar tag, and the package must indicate the contents. An individual having an unmarked cut of a big game carcass must upon request of any law enforcement officer furnish the name and address of the person who killed it, plus any other information needed to establish legal possession.

Game taken in Pennsylvania may not be shipped out of the State, although mounted specimens may be and game legally taken by a licensed nonresident hunter may be taken out personally by that hunter. In the latter case no more may be taken out than the number that may be lawfully killed in three days.

Buying and selling of game are prohibited, except deer or rabbits killed in another state or nation, or skins of raccoons and bears no matter where killed, and other game legally killed and imported from another state or nation when properly tagged. Game coming from outside Pennsylvania for sale must have tags attached identifying species and origin,

and a five cent Game Commission seal must be attached to each carcass before it is offered for sale.

This does not prevent sale of game raised under propagating permit and properly tagged, nor sale of live raccoons legally possessed for liberation within the State, or the introduction of game for propagation, liberation or any other purpose after it is inspected and legally passed, or traffic in animals raised in captivity and not found in a wild state in Pennsylvania, or traffic in heads and skins of game not killed in a wild state in Pennsylvania. There is also a provision on authorizing sale of deer hides from animals lawfully killed if disposed of by the original owner within ninety days after the close of the previous open season. This does not permit anyone but the Game Commission to sell skins of deer killed as a protection to crops.

The Game Laws prohibition against automatic firearms was upheld in the famous case of *Commonwealth v. McComb*, 227 Pa. 337, 1910. The requirement that the head be left attached to big game was declared constitutional in *Commonwealth v. Meckes*, 39 D. & C. 413, 144 Pa. Super. 381, 1941, and *Commonwealth v. Madison*, 16 D. & C. 824, 1931.



WALKIN' SHOES

By NED SMITH



Who's Who In The Owl Family

1. What is the smallest owl found in Pennsylvania?
2. Why does the snowy owl appear in this state every few years?
3. Which owl is called the "monkey-faced owl"?
4. The long-eared owl is our largest owl with ear tufts. True or false?
5. Which owl appears in two distinct color phases?
6. The barn owl is known as the "hoot owl". True or false?
7. Where does the short-eared owl build her nest?
8. What two owls commonly feed during the day?

ON his school paper a small boy wrote that an owl "is a thing like a bird that lives with witches and is smart." The lad's father probably could not have added a great deal to his son's description, nor could most of us. Owls, it seems, are not something with which the average person is too familiar.

The reason, of course, is that they are seldom abroad during the hours of daylight, preferring to remain out of sight in some hollow tree, out-building, or dense thicket. After nightfall though, the story is somewhat different, for it is then that their day begins.

Owls are highly specialized for

their existence as nocturnal predators. To supplement their exceptionally keen night vision they are gifted with hearing that is probably the most acute of all birds. The faintest stirring of a mouse in its grassy avenue is detected at unbelievable distances. Even their plumage is custom made. The feathers are soft and fuzzy, giving them flight that is silent as a shadow. For catching and killing their prey nature has fitted them with powerful feet armed with long, needle-sharp talons, and a stout hooked beak.

When possible these birds swallow their prey whole. Indigestible matter such as bones, hair, and feathers are later ejected from the mouth in the form of oblong pellets. Wildlife technicians often dissect these pellets to determine the bird's feeding habits.

It is a well-known fact that most owls are highly beneficial. Feeding at night when mice and rats are most active it is only natural that these destructive rodents form the bulk of their diet. It would be ridiculous to suppose that game, song birds, and poultry are not occasionally taken, for the owl has no conception of what man considers vermin and what he considers *his* property. Neverthe-



less, attacks upon desirable wildlife and domestic birds are surprisingly infrequent and certainly do not justify wholesale condemnation of the entire clan. The great horned owl is surely the most destructive. The snowy owl, during his brief journey southward, might also partake of an occasional game bird or animal, and the barred owl is sometimes guilty of the same transgression. But on the whole these birds are almost completely beneficial.

A peculiarity common to owls is their inability to rotate the eye in its socket. For this reason the head must be turned to direct the gaze from one place to another. To compensate for this inconvenience Nature has given these birds a particularly supple neck on which the head can revolve in an almost complete circle.

Eight species of owls are found in Pennsylvania. Most of these not only nest here but are also found in this state in winter, at least in limited numbers. Anyone can learn to recognize the call notes of the various species, but only the sportsman who spends a lot of time in the outdoors is likely to become really acquainted with all of them. Perhaps the following descriptions and illustrations will help.

Barn Owl—A rather large bird, eighteen inches in length, easily identified by the heart-shaped face

and deep-set black eyes. The upperparts are golden tan marked with smoky gray smudges and finely speckled with black and white. The underside is white or buff, flecked with scattered small black spots. No other owl has such exquisitely soft and delicately marked plumage.

Its grotesque visage has earned for the barn owl the unflattering nickname of "monkey-faced owl," and its habit of bowing low and swaying from side to side presents a weird sight indeed. Its vocabulary ranges from an unbirdlike hiss to a rasping, piercing "Scre-e-e-e" that is often uttered in flight.

While the barn owl is admittedly not the Rock Hudson of the bird world, he is certainly one of the most completely beneficial. So passionately fond of mice and rats is this bird that he seldom partakes of other fare.

As the name implies, these birds commonly nest in barns, but bell-fries, silos, hollow trees, and even holes in the ground are acceptable. A few birds remain in Pennsylvania to harass the local mouse population throughout the winter.

Snowy Owl—A large bird—two feet long—without ear tufts. The plumage is white barred with dusky brown. Generally, the females are more heavily marked than the males. The eyes are yellow.

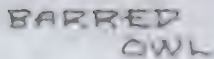
The tundra regions of the far North are home to the big snowy owl. There it hunts lemmings, arctic



PELLETS REGURGITATED
BY SCREECH OWL (LEFT)
AND GREAT HORNED OWL



SNOWY OWL



BARRED
OWL



BAR
OWL

hares and ptarmigan, lays its white eggs in a sparsely lined depression in the ground, and rears its young. The sudden appearance of numbers of these birds in Pennsylvania about every fourth winter is due to the periodic scarcity of the lemmings in the north.

Their habits reflect life in the barrens. Coming as they do from a treeless region they prefer our farmlands, marshes, and beaches to our forests. They rarely perch in trees, but sit for hours on rocks, muskrat houses, haystacks, or simply on the ground watching for their prey. Long arctic days have taught them to forsake the nocturnal habits of the owl tribe and they are normally up and around throughout the day. Their lack of fear is evidence that men and guns are unknown in their native haunts.

Although it is a swift flier the snowy owl is not particularly harmful to game. Surely the sight of this handsome visitor from the wild tundras of the North is well worth the few rabbits and birds it devours in its brief stay with us.

Barred Owl—Larger than the barn owl. The upper parts are dark sooty brown barred with whitish. The underparts are white, the breast and throat barred with dark brownish gray and the sides and belly streaked with the same color. The eyes are dark brown.

A more talkative bird than the "hoot owl" is hard to find, particularly in the mating season. In the evening and again before daybreak the woodlands ring with its throaty "Who-who-who, who-who, who-hoo-ah." A conversation between two in-



dividuals involves a weird mixture of hoots, yells, wails, and maniacal laughter, the whole uttered with a human, albeit ghostly, quality. Occasionally its notes are heard during the daytime.

The barred owl is seldom found high on the mountains. Rather, it seems to favor the deep forests bordering streams or lakes. There it finds a suitable hollow tree or abandoned hawk nest to receive its eggs, and raises its young with little interference from anyone. It is found in Pennsylvania the year 'round.

Saw-whet Owl—The smallest owl in Pennsylvania, rarely exceeding 8½ inches in length. The upperparts are dark reddish brown. The head is finely streaked, the back and wings spotted, and the tail barred with white. The underparts are white streaked with reddish brown. The

eyes are yellow and the facial discs are radially streaked with brown. It has no ear tufts.

The saw-whet seldom nests in Pennsylvania and is usually found here in winter. It is probably our rarest owl, although its habit of spending the daylight hours snoozing in the thickest of evergreens might be the reason it is so seldom encountered.

The saw-whet is incredibly tame, frequently allowing itself to be caught in the hand. After nightfall, however, it is all owl and hunts with an intensity out of all proportion to its size. White-footed mice are its favorite food.

The call from which it derives its name is a rasping "skree-kerr, skree-kerr" that closely resembles the sound made by the filing of a cross-cut saw. Its other call consists of a

series of rapidly repeated mellow notes all uttered on the same key.

Great Horned Owl—A huge bird two feet long with a wingspread of fifty-five or sixty inches. Aside from its size it is characterized by large ear tufts, rusty facial discs, and predominantly ashy coloration. The upperparts are brownish gray, heavily mottled with black and flecked with white and buff. The throat is white, the underpart white washed with buff and finely barred with sooty brown or black. The huge eyes are yellow.

The fierce great horned owl is probably our most destructive bird of prey. Although in fairness it must be said that these birds do consume lots of harmful rodents they are too fond of rabbits and other game to endear themselves to most outdoorsmen. Surprisingly enough, even the indolent skunk, who enjoys immunity from practically all other predators, is frequently snatched up by the great-horned owl, the threat of retaliation deterring the latter not one bit.

Every true outdoorsman recognizes the great horned owl's basso "hoo-to-hooo, h-o-oo, hoo" Various individuals have their own personal variation of this arrangement, but the song is always rendered in that hollow, throaty, but far-reaching tone.

No other Pennsylvania bird nests as early as the great-horned owl. The two or rarely three white eggs are laid in an abandoned crow or hawk nest, or in a hollow tree usually during the first half of February.

Long-eared Owl—A slender crow-sized owl with long ear tufts. Its upperparts are sooty brown mottled with pale gray and buff, flecked with black. The underparts are whitish, prominently streaked with dark brown, lightly barred with dusky, and tinged with buff. The ear tufts are proportionately longer and closer together than those of our other eared owls.

The long-ear has a variety of calls and "songs," ranging from a cat-like yowl to a brief quavering whistle. A note described as midway between a hoot and the bark of a dog is sometimes heard.

Considering that he is fairly common in Pennsylvania the long-eared owl is certainly not well known. Of course, he does little to advertise his presence, resting out of sight in dense evergreen or grapevine thickets during the daytime. His bittern-like trick of compressing his feathers and drawing his body to full height when approached makes him even more likely to go undiscovered. So distorted, he looks more like an old gray snag than an owl.

Screech Owl—A short, squatty little bird, our only small owl with ear tufts. Two color phases occur, often times in the same brood. In the gray phase the upperparts are grayish brown, grayer on the back, mottled with gray and black. The underparts are whitish, streaked and finely barred with black. In the red phase the predominant color of the upperparts is bright rusty, streaked and mottled with black. The underparts are white, streaked with dark grayish brown and barred with light reddish brown.

Throughout most of Pennsylvania this is the most familiar owl, due chiefly to its frequent and persistent vocal efforts. Its song is a soft, tremulous whistle that slides quaveringly down the scale. Occasionally it is varied by the insertion of a single, trembling note that is held for several seconds.

Screech owls invariably nest in a hollow tree, an unoccupied flicker house, or some similar cavity. They are with us the year 'round and apparently haven't the slightest aversion to living in the midst of human habitations.

This small owl is an excellent mouser. In addition, much of its sum-

mer diet consists of insects—grasshoppers, crickets and beetles ranking among the most frequently taken.

Short-eared Owl—A medium-sized owl with very small ear tufts. The upperparts are dark brown marked with buff, the underparts white to buff streaked with dark brown. At a distance the bird appears decidedly buffy. The eyes are yellow, broadly rimmed with black.

This is the owl that dares to be different. It frequently hunts during the daytime. It perches, roosts, and nests on the ground. And at times it is quite gregarious.

In Pennsylvania the short-ear is most likely to be seen while migrating in the spring or fall. At this time it is frequently observed criss-crossing the bogs and meadows on loosely flopping wings, skimming low above the grass-tops in search of the mice that make up nearly all of its diet.

The usual note is a snarling "kee-yow," although a series of "whoos" are frequently heard during the mating season.

As would be expected of a bird that seems so fond of terra firma, the nest is placed on the ground, usually in a marsh.

Answers to the questions.

1. The saw-whet owl.
2. It comes south in search of food when the lemmings in its tundra home becomes scarce.
3. The barn owl.
4. False. The great horned owl is much larger.
5. The screech owl.
6. False. The barred owl is commonly referred to as the hoot owl.
7. On the ground.
8. The short-eared owl and the snowy owl.

Seek Wild Turkey Sex, Age and Weight Information

The Game Commission will this fall gather sex and age data from wild turkeys bagged in Pennsylvania. It is thought that information on the composition of the kill may become increasingly important in the future management of this valuable game bird. When the actual weight of such trophies is available it also will be recorded. Game Protectors will assist the Commission's field biologists in collecting and recording this information while on routine in-season duties.

The identifying markings and characteristics of the gobbler and hen are offered here as a guide for hunters who are unable to determine the sex and age of wild turkeys brought to bag.

Sex differences: The male's breast feathers have black tips. His spurs are large "buttons" the first year and are one-half inch long or longer on older birds. The female's breast feathers are tipped a chocolate brown, and her spurs are merely buttons no matter what her age.

Age differences: The central pairs of tail feathers of the juvenile are longer than the others when the tail is spread. The beard of the male seldom extends beyond the breast feathers. The feet and legs are grayish-brown in color. In the adult bird all tail feathers are the same length when the tail is spread. The beard of the male extends well beyond the breast feathers. The feet and legs are pink in color.





FIELD NOTES



Mother Goose Motel

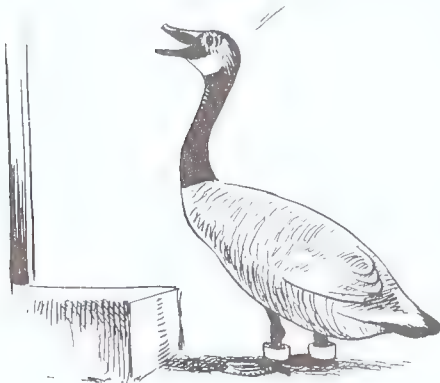
SULLIVAN COUNTY—During the month of August, I received a phone call from a Mrs. Dave Gebhart, who resides in Colley Township, Sullivan County, asking whether or not we had stocked any geese lately? I replied, that we had stocked some a short time ago. Whereupon, she related, the following: While walking from the main house to their motel she spotted this strange fowl walking down the lane past their place of business and being curious she made some sort of coaxing sound and was close enough that she could see two bands on the legs of the waterfowl, one green plastic and the other aluminum. Being thus satisfied as to her curiosity she then proceeded about her business of readying one of the motel rooms. While doing this she went to the screen door upon hearing a knocking or picking around and much to her surprise and amazement there stood Mr. Canada Goose. I went to the Gebhart home and picked the Canada goose up and again released the bird in the original re-

lease area. (Beaver Dam in refuge Colley Township). While in the area of the Gebhart home several days later I was again surprised to see Mr. Canada floating peacefully on their pond in front of the motel. The amazing part of this is that the Canada goose had to travel approximately 4-5 miles by foot (due to primary wing feathers being pulled) through mountainous predator infested terrain to the Gebhart home each time. But I guess to his way of thinking it must be worth the trip as he receives fine treatment and is now considered a permanent guest at the motel, at least until fall when he will probably respond to the migrating cries of his brothers.—District Game Protector—Paul W. Asper, Laporte.

Deer Will Be Deer

MONTGOMERY COUNTY—The deer season did very little to improve our deer situation in Lower Montgomery County. Since the season has closed I have seen just about as many deer as before and police officers in the various townships have reported seeing many deer while on their patrols. The deer are now moving back into their old haunts after spending the open season in townships closed to hunting or in areas where the hunters could not get to them. The way the deer population has been developing can be shown very well by the accidental kills recorded over the past few years. In 1951—13 deer, 1952—22 deer, 1953—39 deer, 1954—55 deer, 1955—86 deer, 1956—88 deer and 1957—141 deer.—District Game Protector Donald L. Croft, Hatboro.

SINGLE WITH BATH?





Big, Black Berry Picker

LUZERNE COUNTY—While I was patrolling along State Game Lands #91 I stopped and talked to a berry picker and he told me that he was picking high bush berries with his buddy. They were sticking pretty close together and kept talking to each other while they were picking from the same bush. All of a sudden he noticed that no one was answering him but he heard somebody picking by him so he looked up and to his surprise there was a big bear directly facing him picking berries from the same bush that he was picking from. Maybe if the berry picker would have had an extra bucket, the bear wanted to help him.—District Game Protector Edward Gdosky, Dallas.

What'll You Have

DELAWARE COUNTY—A friend of mine told me that while standing on the bank of a rain swollen stream he saw a beer can which appeared to be caught in some small bushes in the water. As he watched the can floated loose, but started to move upstream. Having boots on, he waded into the water for closer inspection and discovered that the power behind the can was a seven pound snapping turtle which had managed to get the can over its head. As the turtle was anything but thankful after the can was removed, it decided he might be a little more pleasant in a "Snapper Soup."—District Game Protector Daniel S. McPeck, Glen Kills.

Shuddering Shutter Bug

BERKS COUNTY—Two of our local bow hunting group, Roy Troutman and Hugh Mooney have a new story to add to their collection.

It seems a mighty buck was seen one night while the boys were spotlighting for deer. They decided not only to collect him in the coming archery season, but to get a picture of him for the records.

One night the mighty hunters set forth, armed with a flash camera and a powerful spotlight. Troutman operated the spotlight while Mooney, with the camera, crept through the dark fields to get close to the deer.

The operation was working successfully when Troutman heard Mooney let out a yell. It seems that Mooney had stepped on a skunk in the dark.

P.S. Mooney came home without the picture he went after and minus his trousers which had to be hung from the back of the jeep.—District Game Protector Samuel C. McFarland, Centerport.





On Featherbed Hill

BUCKS COUNTY—Featherbed Hill has for many years been a favorite roosting place for crows. This widely known rookery is located a few miles west of Doylestown Borough and is visited by almost as many hunters as crows. For this reason our officers make regular checks of the area.

On several evenings during the month of August it was observed that, roosting with the crows, were a few large, white birds. At first we thought that these were albino crows; but one night we were able to get close enough to identify the strangers as American egrets.

These beautiful visitors are not uncommon along our streams during the latter part of the summer; but this is our first experience of noting them roosting with the black rascals. Apparently they are not a bit particular about their bed fellows.—District Game Protector William J. Lockett, Doylestown.

You Can Lead A Beaver To Water But . . .

NORTHEAST DIVISION—Five years ago, I attempted to have the beaver establish a dam on State Game Lands #180, Lords Valley on a small stream. Two beavers were live-trapped by Game Protector Myers now of

McKean County and these were released at the site of the expected dam. They stayed there about two weeks and moved off for parts unknown. The next year, I released 3 more beavers at the spot but again after a couple of weeks they too took off. Two years ago, we had to get across the stream to some new food strips so we had two 30 inch sluice pipes set in the stream and built a gravel road over them. This summer, two beavers moved into the area plugged the two pipes and have added about a foot of their own material to the top of the roadway. We now have a nice dam which is being used by a number of ducks which was the intention of a dam. Now our problem is to keep enough road way to permit our farming equipment to move over to the food strip area. Moral of the story: You can lead a beaver to water but he won't build the dam when you want it or how you want it.—Land Manager, Albert J. Kriefski, Blooming Grove.

Silent Rattler

SCHUYLKILL COUNTY—Food & Cover Foreman E. M. Stover, reports that he killed a four foot rattle snake while working on roads in the State Game Lands #211. This was a large yellow rattler and while they are rather common in this area this one was devoid, totally of any rattles and would have been unable to give the rattle which most people associate them as a warning. It pays to keep close watch.—District Game Protector Ralph L. Shank, Pine Grove.

I'M THE SNEAKY TYPE!



Warbling Wabbits

GREENE COUNTY—Mr. Sweeny, one of the faithful members of the Greensboro Sportsmen's Club attended the County Meeting on August 31 and as soon as he saw me he said he had something to show me. He had it in a glass jar and when he rolled it out on the ground before several of us and asked what it was, most of us were unable to name it. I happened to know what it was because I had squeezed them out of cows' backs. It was what we call warble and as repulsive a looking varmint as one could imagine. Oval shaped, about one inch long and three quarters of an inch wide and half an inch thick. Their hounds had been chasing a rabbit the day before and had caught the rabbit which was strange until they examined the rabbit. It was small but had two of these warbles in its neck. I have seen them in rabbits often and I am satisfied in my own opinion that these warbles are part of the answer to the million dollar question, "What becomes of the rabbits between May and November?"—District Game Protector John F. Blair, Waynesburg.

Snow White-tail

NORTHCENTRAL DIVISION—During the past two months I have had the opportunity to observe an albino fawn deer about one-half mile from my headquarters on State Game Lands #25. The adult doe deer it is with is normal in pelage. The fawn has two places where it beds down during the day. If it had normal coloration it would be hardly noticed. I guess it doesn't realize nature played a trick on it, and it stands out like a sore thumb with its snow white coat among the dull brown of the ferns and grass.—Land Manager Robert H. Sphar, Wilcox.



Bill of Fare

ROSS LEFFLER SCHOOL OF CONSERVATION—Students of the school enjoyed an order of fried rattlesnake, prepared by School Cook, Art Webb, early in August. The snake was killed by Game Protector Leo Milford while conducting us on a field trip to the Waterfowl Impoundments in the Allegheny National Forest. Suprisingly enough, all but a few of the Students tried a portion, and most found the meat somewhat agreeable, but not agreeable enough to warrant any new hunting.—Student Officer Edward F. Divers, West Mifflin.

Full House of Fawns

CAMERON COUNTY—The crop of fawns this year is high. One evening I took my two sons for a ride over State Game Lands #14 and came on to a very unusual sight. We saw two old doe with a total of five young all bunched together in the middle of the road on the West Branch of Hicks Run. Two of the fawns were fighting each other with their front feet. This is the second set of triplets I know of in my district.—District Game Protector Norman L. Erickson, Emporium.





Almost 264,000 Game Birds Released In Commission's Stocking Program

Almost 264,000 game birds have been liberated in Pennsylvania by the Game Commission so far this year, or will be stocked in appropriate areas before the end of the 1958 small game season. The Commission's Propagation Division provides the following details on these releases:

Pheasants. Nearly 35,000 ring-necks, equal sex ratio, were turned loose this spring. Over 17,000 of these birds, in the ratio of 1 male to 8 females, were released in June of this year. During October more than 28,000 cocks and nearly 15,000 hens were liberated. During November, in-season releases totaling some 12,000 cock pheasants will be made. Final figures on the pheasant chick program have not been tabulated. But on the basis of the number provided qualified farmers, and the percentage of rearing success last year, it is anticipated that approximately 127,000 of these birds will be liberated as fully grown pheasants prior to and during the 1958 season. The ratio will be about 50-50, cocks to hens.

Quail. Bobwhites liberated on agricultural land in the Commonwealth this spring, totaled 2650. The sex ratio was half males, half females. In the summer 300 pairs of breeders were set free on farms. About 8,000 of these desirable little birds were released this fall, about evenly males and females.

Wild Turkeys. Over 3,100 of these great birds, one gobbler to 4 hens, were turned loose in appropriate habitat during the spring of this year. Prior to October 25, the opening day of the small game season, about 3,500 young tom turkeys will be taken from hardening pens, where they have been conditioned to the wild, and liberated in suitable mountain sectors of the state.

Ducks. Over 11,300 mallard ducks and about 200 Canada geese were released by the Commission on desirable water areas within Pennsylvania during 1958. All the ducks were leg banded with aluminum. Pennsylvania Game Commission leg bands. The geese were banded with colored plexiglass "bracelets" so that the year of their release could be determined at a distance.



Pa. Fish Commission Photo by Johnny Nicklas

BRUIN IS PENNSYLVANIA'S BIG GAME PRIZE

Each year the dream of bagging a large black bear lures thousands upon thousands of sportsmen into the vast stretches of mountain woodlands still to be found in populous, industrial Pennsylvania. Many hunters consider the bear the most desirable of all big game prizes, and the sportsman who takes one of the occasional cinnamon-colored bruins is doubly rewarded.

This year the state's week-long bear season opens at 7 a.m. November 24 and ends at 5 p.m. November 29. Most of the wool-clad hunters concentrate on the rugged, forested northern counties, homeland of most of these game animals. These sportsmen are the hardy type, because driving or tracking bears over rough terrain and through swamplands is for the young and the well-conditioned. Their prayer will be for a light tracking snow. Bears are more easily seen against a white background, which also provides a better opportunity to judge the size of the animal, therefore reduces the likeli-

hood of shooting a cub. Deep snow makes travel afoot more difficult and if combined with cold weather, often causes bears to hibernate early and thus limits shooting opportunities.

The black bear population in Pennsylvania has not apparently declined in recent years. In the one week season of 1956 the reported legal bear kill in the state was 33, which was about an average harvest.

In the 42 seasons the black bear kill has been recorded in the Commonwealth (there was no season in 1934) 17,992 legal bears have been taken. The largest of record weighed 633 pounds before it was hog dressed. Many bears over 300 pounds, some 400 pounders and an occasional one weighing in the neighborhood of 500 pounds, have been taken in the state since 1915, when the record was instituted.

Until recent years the prime bear range lay in the counties of Potter, McKean, Warren, Forest, Elk, Cameron, Clinton, Lycoming, Sullivan, Tioga, and Bradford. But in the last few years the range has spread. Sizeable kills have been made in Clarion, Jefferson, Clearfield, and Centre Counties, to the South. The bear bag in the following eastern counties, too, has greatly increased: Pike, Monroe, Wayne, Lackawanna, Wyoming, and Luzerne.

In Pennsylvania a legal bear is over one year old. An individual hunter may take one bear in the season; a party of three or more persons may take two. Automatic, semi-automatic or auto-loading guns of any kind are prohibited. Pump shotguns firing rifled slugs or pumpkins, balls, also high-powered rifles, may be loaded to capacity for bear hunting. Firearms discharging .22 or .25 rimfire cartridges are prohibited. A roster is required when five or more persons hunt together or in any way cooperated in hunting bears.

Many State Parks To Be Open For Pennsylvania Hunters

Many of the Commonwealth's State Parks will be opened to hunting for the 1958 seasons. Signs clearly indicating "No Hunting" will be conspicuously posted in those areas where hunting will be prohibited. The signs will be erected at regular intervals around all restricted areas, providing protection for non-hunters using Park facilities during the hunting season.

In announcing the opening of the Parks, Governor George M. Leader commented, "We are continually attempting to improve conservation measures for the over-all benefit of our game. As a result of yearly studies of game populations, feeding habits, flora damage and wildlife health, we are able to determine each year which park areas can be hunted.

Information maps indicating open and restricted areas in 12 of the larger parks open to hunters are available. Requests for maps of the following parks may be procured from Local District Foresters, Park Superintendents and Rangers: Chapman State Park—Warren County; Big Pocono State Park—Monroe County; Cook Forest State Park—Clarion, Forest and Jefferson Counties; Raccoon Creek State Park—Beaver County; Laurel Hill State Park—Somerset County; Blue Knob State Park—Bedford County; Shawnee State Park—Bedford County; Ricketts Glen State Park—Luzerne and Sullivan Counties; Tobyhanna State Park—Monroe and Wayne Counties; Crooked Creek State Park—Armstrong County; French Creek State Park—Berks and Chester Counties; Hickory Run State Park—Carbon County.

Gordon Named to Water Pollution Control Advisory Board

Seth Gordon, director of the California Fish and Game Department since 1951, will be one of the chief advisors to the Surgeon General of the U. S. Public Health Service in carrying out the Federal water pollution control program. His appointment to the advisory board was announced by the President in August.

A veteran in national and state conservation activities, Gordon was conservation director of the Izaak Walton League of America from 1926 to 1931, president of the American Game Association from 1931 to 1935, and has been a trustee and vice president of the North American Wildlife Foundation since 1947. He is a member of the International Association of Game, Fish, and Conservation Commissioners, American Fisheries Society, The Wildlife Society, and other conservation organizations, the Wildlife Management Institute reports.

As a member of the Advisory Board, Gordon will consult with and make policy recommendations to the Surgeon General relating to the administration of the Federal Water Pollution Control Act of 1956. That Act strengthened an earlier one in three broad areas of research, enforcement, and Federal grants to aid communities in sewage treatment plant construction.



Photo Courtesy Eldy Johnston.

HUNTER SAFETY CLASS for Deputy Game Protectors in Allegheny County was conducted early this fall by acting Game Protector James Way. Under a new Commission program, all salaried officers and deputy game protectors in Pennsylvania were given training to qualify as hunter safety instructors.

First Bennett Memorial Shooting Dog Stake

The inaugural running of the Logan J. Bennett Memorial, an open shooting dog stake, found 38 pointers and setters from five states and the District of Columbia competing. The Memorial was held September 21 on State Game Lands No. 230, five miles north of Carlisle, Cumberland County. It honored the late Dr. Bennett, Executive Director of the Pennsylvania Game Commission. The stake will be run annually hereafter.

A female pointer, Miss Paladin, won the shooting dog stake. She is owned by Mr. Verle Farrow of Fairfax, Va. Mrs. Eleanor Bennett, widow of the bird dog expert for whom the stake was named, was at the inaugural running to present the winner's award to George Hamm, who handled Miss Paladin.

Understandably, the originator of the event is E. R. Kauffman of R. D. Mechanicsburg, Pa., a friend of the late Dr. Bennett. Mr. Kauffman was well qualified to initiate the contest having attended and judged numerous bird dog trials, many of them in the South, and having owned a champion.

Hunting License Sale Continues Upswing

During the 12-month period ending August 31, 1958 the sale of Pennsylvania hunting licenses increased 32,453 over the number sold in the previous license period. The total 1957 sale was 970,517, of which residents bought 929,990 and non-residents 40,527. (825 of these licenses were issued without charge to resident disabled war veterans.)

This "general" license permits the owner to hunt all resident small and large game, also certain migratory birds—woodcock, mourning doves, sora rails, gallinules, and jacksnipe—as well as to trap furbearers. Ownership of additional license is required of a person who wishes to hunt deer with bow and arrow during the separate archers' deer season or to hunt antlerless deer during the "doe" season. The person who desires to hunt migratory waterfowl is required to own a federal migratory bird stamp as well as a current hunting license.

Judging by the number of persons who purchase a Pennsylvania hunting license man still falls to the lure of the outdoors, and the urge to match skill against the speed, deceptiveness or cunning of creatures in the wild continues.

RESIDENT AND NON-RESIDENT HUNTERS' LICENSES ISSUED BY COUNTY

COUNTIES	RESIDENT		NON-RESIDENT	
	1956	1957	1956	1957
		D.V.		D.V.
Adams	6,890 (1)	7,442 (1)	467	603
Allegheny	73,588 (39)	75,822 (41)	185	197
Armstrong	13,213 (7)	13,734 (8)	217	217
Beaver	17,187 (9)	17,757 (12)	340	359
Bedford	8,707 (8)	9,301 (9)	590	696
Berks	24,330 (18)	24,512 (23)	62	67
Blair	17,853 (18)	16,921 (19)	288	292
Bradford	9,283 (9)	9,894 (8)	688	822
Bucks	15,974 (12)	17,044 (16)	848	918
Butler	15,179 (30)	15,278 (11)	148	169
Cambria	23,877 (17)	24,394 (18)	380	434
Cameron	1,722 (2)	1,764 (3)	316	433
Carbon	6,438 (12)	6,944 (9)	123	124
Centre	12,432 (11)	12,231 (14)	242	244
Chester	15,850 (8)	16,676 (9)	610	746
Clarion	9,072 (12)	9,417 (12)	909	942
Clearfield	14,871 (14)	14,837 (19)	804	809
Clinton	7,812 (13)	8,064 (15)	201	244
Columbia	8,406 (2)	9,299 (4)	114	142
Crawford	14,368 (15)	14,617 (14)	1,017	1,216
Cumberland	15,988 (5)	16,405 (8)	60	79
Dauphin	20,638 (31)	21,085 (31)	163	159
Delaware	12,436 (13)	12,923 (16)	189	235
Elk	6,590 (3)	7,095 (5)	475	613
Erie	24,917 (19)	25,878 (13)	948	1,042
Fayette	18,471 (27)	18,333 (30)	259	275
Forest	1,482 (1)	2,794 (4)	733	1,005
Franklin	12,622 (3)	13,197 (5)	424	510
Fulton	2,258 (11)	2,707 (9)	212	261
Greene	4,942 (5)	5,201 (5)	154	160
Huntingdon	7,711 (12)	8,413 (15)	258	240
Indiana	11,330 (13)	11,835 (18)	372	432
Jefferson	10,569 (19)	10,584 (26)	693	807
Juniata	3,475 (4)	3,695 (4)	97	90
Lackawanna	15,471 (19)	15,590 (25)	286	319
Lancaster	29,557 (18)	29,695 (18)	155	154
Lawrence	11,662 (7)	11,809 (6)	1,523	1,732
Lebanon	10,277 (10)	10,736 (10)	46	35
Lehigh	15,310 (13)	15,934 (14)	100	109
Luzerne	28,970 (25)	28,187 (27)	608	685
Lycoming	17,976 (15)	18,202 (14)	391	352
McKean	10,008 (5)	10,379 (9)	1,496	1,878
Mercer	16,615 (9)	17,153 (8)	2,670	2,902
Mifflin	8,192 (12)	8,374 (15)	200	199
Monroe	6,569 (6)	7,529 (10)	694	692
Montgomery	25,438 (12)	25,837 (11)	87	84
Montour	2,254 (3)	2,310 (3)	20	24
Northampton	16,806 (11)	16,800 (11)	811	804
Northumberland	13,552 (16)	13,201 (16)	85	126
Perry	4,914 (5)	5,400 (7)	50	46
Philadelphia	25,284 (11)	25,533 (11)	727	759
Pike	1,806 (1)	3,010 (3)	2,122	2,421
Potter	3,693 (7)	4,101 (6)	839	1,189
Schuylkill	19,883 (17)	19,651 (16)	120	154
Snyder	4,316 (8)	4,418 (8)	40	30
Somerset	12,944 (16)	13,545 (15)	487	577
Sullivan	1,488 (4)	1,867 (4)	110	119
Susquehanna	5,413 (2)	5,882 (2)	482	678
Tioga	7,509 (4)	8,167 (5)	539	768
Union	3,847 (6)	4,562 (9)	63	111
Venango	10,107 (8)	10,487 (14)	1,151	1,072
Warren	6,771 (10)	7,112 (7)	1,298	1,547
Washington	21,666 (14)	22,961 (14)	685	738
Wayne	5,172 (11)	5,694 (10)	854	1,109
Westmoreland	37,209 (29)	38,025 (31)	202	224
Wyoming	2,936 (1)	3,454 (1)	140	183
York	26,313 (7)	27,072 (11)	626	864
Dept. of Revenue	1,131 (—)	1,220 (—)	2,231	2,261
Totals	902,540 (765)*	929,990 (825)*	35,524**	40,527**

* The Figures in parenthesis indicate "Free Licenses" issued to Resident Disabled War Veterans, which are included in column of "Resident Licenses."

** Includes Allen Non-Resident Hunters' Licenses as follows: 1956, 6; 1957, 9.



The Shotgun On Big Game

By Jim Varner

THE harvest moon of October has vanished into memories of the past and by now the hunt is on in full swing everywhere within our Commonwealth. The last of November, however, just about draws the curtain on our legal small game season with the shotgun and too soon it also is relegated to the past.

Does this mean that the fellow who owns only a smoothbore has to step aside and not take part in the hunt for bear and deer? Does a smoothbore handicap the nimrod who enjoys going after big game? The answer is definitely NO! Actually, a good small game shot will shoot faster and more accurately with rifled slugs from his favorite shotgun than he would with any rifle with which he is not familiar. In many cases he will easily out-

shoot a lot of so-called good rifle shots, especially at ranges up to 75 yards in dense cover.

So light up your pipes, fellows, and let's delve into this subject more thoroughly. Forget about shot charge ballistics for the time being and consider rifled slugs which are allowed in Pennsylvania with no limit as to the number of hulls your repeater will carry, whether it is slide, bolt or lever action. Of course, a double will carry only two. And remember, you are not allowed to use your automatic shotgun in any manner with any ammunition on big game. It can be used for small game only.

Our smoothbore devotee may not realize the fact, but he does possess a very potent sporting arm for either bear or deer if he cares to do some intelligent experimenting and not leave everything to chance. To commence with the rifled slug as loaded by our leading ammunition companies replaces the ancient round ball or "pumpkin ball" as many called it.



Most of you know the basic principle of the rifled slug. If you do not know, I suggest you dissect a modern shell loaded with one and see for yourself what makes it "click." It was first loaded by Winchester and known as the Foster rifled slug. The designer of the slug was denied a patent due to the fact it is basically similar to the famous Minie ball which was invented by a Frenchman by the name of Captain Minie. His invention was used extensively during the Civil War in our 58 Caliber rifled muskets. Both projectiles are made of pure lead and are hollow at the base. This feature is about as far as comparisons can go.

The Civil War Minie ball was moulded slightly smaller than the bore diameter of our 58 cal. musket. It had grease bands to lubricate the barrel after each shot. The slug was pushed down the barrel to the powder charge with a ramrod. The explosion of the powder expanded the hollow base to the extent its walls

sealed the bore tightly and rode the rifling on the way out. With the proper powder charge it was quite accurate. On the other hand our rifled slug has a greater cavity at its base but does not come in direct contact with the powder. It rests on the wadding same as a shot charge. Instead of having horizontal grease bands it has fins of soft lead which are pressed at a slight angle lengthwise of the slug. These fins are supposed to catch enough air pressure to cause them to spin like a rifle bullet spins point on due to the action of the rifling. I doubt, however, whether it does this spinning to any great extent. I do feel certain the sudden impact of the propulsion charge expands the rifled slug so it seals the bore to a great extent and being free from a cap wad it flies point on for a considerable distance before it loses its accuracy. Repeated tests at all ranges up to 150 yards bear me out in this theory. The slug's center of



THREE SHOT GROUPS were fired by the author using a Model 12 Winchester shotgun with 30-inch full-choke barrel. Western Super X slugs were used at 50 yards from a sandbag rest and then another group was fired from 100 yards.

gravity is well forward and the lead is so soft it shoots about as well from a full choke gun as a true cylinder bore.

Lyman manufactures moulds for rifled slugs and one could mould his own and reload. I believe only the expert should attempt this as there are so many variables entering the picture you could run into trouble. If you do attempt such reloadings, be sure you get full reloading data from Lyman. The factory loaded rifled slugs are swaged under high pressure and are very uniform in contour and weight. A special type of quick burning powder is especially made for them. They are a precision product. I very much doubt whether hand moulded and hand loaded slugs can equal the accuracy of our factory product. I might add here that no factory rifled slug will in any way injure the bore of a modern shotgun regardless of degree of choke. In other words such ammunition will not shoot out the choke.

While I have thoroughly tested the rifled slug on deer in the field, and noted its destructiveness on both bear and deer others have killed, I felt further tests for penetration, range and accuracy were in order for our readers—especially the younger hunters. Please note the results, as here is a run-down on the weight, diameter, velocity, striking energy and range accuracy one can reasonably expect from his 12, 16, or 20 gauge with modern rifled slug loads.

To start with, the 12 gauge slug has a muzzle velocity of roughly 1500 feet per second with a striking energy of nearly a ton. That old 12 gauge rifled slug hits like the "hammer of Thor." At 50 yards its striking 1500 pounds. The 16 gauge slug weighs seven eights of an ounce or 385 grains, and develops a muzzle velocity of 1450 feet per second. At 50 yards its hitting around 1200 foot pounds. The 20 gauge slug weighs five eights of an ounce, about 275 grains, and moseys along at a respectable 1425

RIFLED SLUG ACCURACY TEST was made by the author and an assistant, ex-Marine William Bobar. Here Bobar is firing at 100 yards. Shots were accurate but this extreme range is not recommended for rifled slugs.





FIFTY YARDS firing resulted in this three shot group. Guns and ammunition should be test fired like this before ever trying them on live-game.

feet per second muzzle velocity which means some 900 foot pound energy at fifty yards. The little 410 gauge slug weighs only 90 grains. Its muzzle velocity is listed at 1500 foot per second, which means a striking energy of less than 300 foot pounds at 50 yards—not enough for big game.

Slugs from the 12 gauges drove great gaping holes thru five to six and one half inches of dry pine boards at forty yards. The 16's and 20's were not far behind in penetration. The 12 gauge measures 73 caliber; the 16 gauge measures 67 caliber, while the little 20 gauge measures 60 caliber. This prodigious diameter is well understood by experienced hunters as far as effectiveness is concerned. They know the effect of this increased caliber, all other factors being equal, is tremendous on large game.

Accuracy was near phenomenal with some guns, especially the single barrel repeaters. All shot creditably well. Most double guns have a tendency to throw the slug from the right barrel to the left and the left barrel slug to the right. This fact would

probably be overlooked by the novice. High grade doubles are made to compensate for this cross firing to a certain extent, but do not depend on them being so. Under all conditions do your own testing and do it thoroughly with the gun you expect to use. If you start your test with Super X rifled slugs use them not only for the complete targeting but for the season's hunt. This applies to all brands of ammunition.

I cannot stress too strongly these range tests for accuracy and complete knowledge of your shotguns performance. I am convinced such tests are invaluable to the veteran as well as the novice. Today, over 90% of our simulated hunting and testing can be accomplished on the range. Our hunter-game ratio certainly don't provide us with enough live targets to do otherwise.

Select the rifled slug you are going to use and test your shotgun from a sandbag rest, aiming and squeezing the trigger as carefully as in precision rifle shooting. Use an eight-inch black bullseye on a thirty-

six inch white background. One sights more accurately on a distinct target, especially with the inadequate sights used on most scatter-guns. The range should be 40 or 50 measured yards. If possible to get the range try a few at 75 and 100 yards. Shoot three or five shot groups in each test. Don't blame the gun or ammunition if you are not grouping. The fault is yours; you are flinching. Unless you can correct this case of "jitters" suggest you carry a hunting coat full of horseshoes when in the woods as you are going to need a lot of luck "podner."

Remember the recoil of the rifled slug, while sharp, is not as severe as the express shot load and certainly not nearly as bad as the magnum shot load you done so poor with on small game. The Williams Gunsight Company of Davison, Mich. makes a peep sight for repeaters. Some use shallow open sights on their doubles, while a few mount IX shotgun scopes for both shot and slugs. The accuracy of the rifled slug deserves adequate sights, otherwise one has to hold for windage or elevation—"Kentucky windage and elevation." Knowing where to hold is satisfactory if you practice enough. Some guns will group in three inches or less at fifty yards. Most all guns will stay within a six or seven inch group. At 100 yards we had groups as close as 7 inches but generally off to the right or left and usually four to six inches lower than the fifty yard range. In some cases we noted slight keyholing at the longer range. This showed we were approaching the limit of the slug's best accuracy. Actually it was not intended for long range.

Many may read this article and remain skeptical about the use of the smoothbore on big game. To them I will suggest give it a trial. After you have seen a big buck "pole-axed" with a rifled slug from a twelve bore gun you will change

your mind. Try the penetration tests at 40 yards and I dare say you will look at six inches of mangled mutilated wood and pick out a slab of lead as big as a large washer and feel the same as I, when I heard my testing companion remark, "Jim I wouldn't be afraid to face the worst Kodiak alive with that 12 of mine with the magazine full of such shells." I have never seen a deer stay on its feet after being hit just fairly well with a modern rifled slug. Slugs penetrate brush better than hi-speed bullets.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF PENNSYLVANIA GAME NEWS, published monthly at Harrisburg, Pennsylvania, for 1958.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Commonwealth of Pennsylvania, Pennsylvania Game Commission, Harrisburg, Pennsylvania; Editor, Willard T. Johns, Jr., Harrisburg, Pennsylvania; Managing editor, None; Business manager, None.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Commonwealth of Pennsylvania, Pennsylvania Game Commission, Harrisburg, Pa.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

WILLARD T. JOHNS, JR.,
Editor.

Sworn to and subscribed before me this
30th day of September, 1958.

(Seal)

CHARLES H. PATTERSON,
Notary Public.

(My commission expires February 16, 1960.)



Tournament Statistics

By Tom Forbes

OCTOBER with its brilliant foliage and bright autumn days marked the time of year for which many an archer had practiced long hours throughout the summer season on his favorite field course. Now the field courses are deserted and the bowmen roam the hills and valleys of Pennsylvania in search of the elusive deer with high hopes that the skill they acquired on the field courses will pay off when they lose a feathered shaft at their favorite quarry, the white-tailed deer.

Skill acquired on the field course pays dividends in the hunting field and although we may not have succeeded in our quest for a trophy rack during the archers deer season we enjoy the challenge and will make another attempt during the regular hunting season in December.

Tournament competition provides

a yardstick for measuring the comparative abilities of archers and the State and National Tournaments are attended by the top ranking archers in every class. Each year no further proof that archery skill improves each succeeding year is needed than to note the records that fall by the wayside in State and National competition. New names appear on the record list as relatively newcomers to archery hit their stride.

A summary of the scores shot in competition at the various National and our own State Championship Tournaments permits us to compare our own ability and that of our friends with whom we are accustomed to shoot with the scores shot by the Champions.

Among Pennsylvanians the highlight of the Tournament Season is the State Championship Tournament held for Field Archers and the State Championship Tournament held for Target Archers. At the 13th Annual Open Field Championship Tournament of The Pennsylvania State Archery Association held on the Field Course of the Unami Archers at Em-



maus, Pennsylvania on September 6th and 7th, in the Instinctive Division Frank Schwartz of Allentown shot a 413 Field, a 432 Hunters, and a 470 Big Game Round for a total score of 1315. Winner and Free-Style Champion Robert Kaufhold of Neffsville ran a 419 Field, a 441 Hunters, and a 480 Big Game for a total of 1340. A margin of 25 points separated the winners in their respective Divisions. In the Women's Division the Champion in the Instinctive Division was Nellie Baer of Reading, Pa., who shot a 312 Field, a 332 Hunters, and a 390 Big Game for a total of 1034. The Free-Style title was won by Verna Leaman of Bird-in-Hand with a 174 Field, a 195 Hunters, and a 300 Big Game Round; a total score of 669. In a field of 47 women shooters, ten Instinctive shooters came in ahead of the Free-Style Champion. In the Men's Free-Style Division, the Champion, Robert Kaufhold set new records in the Field and Hunters Round. He is now the record holder for all three rounds of the Field competition.

The State Target Championship of the Pennsylvania State Archery Association was run off at State College over the Labor Day week end. Charles Hein of Pittsburgh won top honors in the Men's Division with a 90-722 in both American Rounds and a 139-779 York which totaled 319-2223. Jay Peake of Charleroi the former National Field Archery Association Instinctive Champion was second with a 90-698, 90-694 American and a 140-820 York, a total of 2212. Watch this chap. He can shoot in any company, either Free-Style or Instinctive. In the Women's Division Carole Meinhart, defending Champion and former World's Champion Lady Archer took top honors with a 90-722 and a 90-718 for the American Rounds and a 72-534 National, and a 72-600 Columbia. Her total an impressive 324-2574; 72 points above her nearest competitor.

On the National scale a field of

1400 Bowmen shot at The National Field Archery Association's Annual Championship Tournament at Grayling, Michigan from July 28 through July 31st. In the Instinctive Division Lon Staton from Missouri won the title of Champion with a total score of 2707. He scored 894 in the 56-target field round, 873 in the Hunter's Round, and 940 in the big game round. In the Men's Free-Style Division the former Target Champion Joe Fries of California who shoots with a field anchor and a sight had a total score of 2851. Fries was in 32nd place at the end of the first day; in 5th spot at the end of the second day. During the final hours of the competition he overtook the lead man and went on to win by a margin of 6 points. Jo McCubbins of Santa Ana, California, former National Title Holder won the Instinctive Championship in the Women's Division with a score of 2219. Her 880 big game round put her ahead in the final stages of the tournament to give her first place by a margin of 22 points over her nearest competitor, Ann Corby who led the field most of the way. In the Women's Free-Style Division Ann Marston of Michigan took an early lead, lead most of the way and emerged the Champion with a score of 2463.

Former National Field Archery Association Champion Jay Peake of Charleroi, Pennsylvania placed fifth, 63 points behind the winner.

The 74th Annual Target Championship of the United States sponsored by the National Archery Association took place at Fort Snelling, Minnesota August 4th through the 8th. Running true to form, this year's National set a number of new records. In the Men's Division Robert Bitner of Big Rapids, Michigan won the Championship with a record breaking single and double York, 983 & 1955; Bitner's total score was 3419. J. Casper of Racine, Wisconsin shot a record single and double American, 782,



STATE CHAMPIONSHIP TOURNAMENT was conducted by the Pennsylvania State Archery Association last September at State College. In the Women's Division Carole Meinhart (third from left) took top honors with a total score of 324-2574.

1528. Bitner's score of 450 for the 100 yards and 360 for the 80 yards in a single York set a new National record. Casper's 202 at 60 yards in a single York is also a new National record. He also established a new record at 60 yards in a single American with 256.

In the Intermediate Boys Class Dennis O'Neill of Minnesota established a new National record in the double Herford and single Herford rounds, 2140-1082. He shot a new high at 80 yards of 492. Jim Yoakum of California shot a new high at 50 yards with a score of 204 in this event. In the Ladies 140 yard Clout Grace Frye of Toledo, Ohio set an all time National record of 36-296.

BOWHUNTERS!
DID YOU REPORT
YOUR DEER?

Mail your big game report card attached to your hunting license to the Pennsylvania Game Commission, Harrisburg today! If you were successful in bagging a deer this year, and if you have not already done so, fill out the report and drop it in the nearest mail box right away!

In the 74 year history of the National Archery Association Annual Target Tournament six Golds at 80 yards have been made on only four occasions. In every instance the feat has been accomplished in the seventh end. A fellow Pennsylvanian Robert Albright of Pittsburgh, member of the Board of Governors of the Pennsylvania State Archery Association turned the trick at this year's Tournament.

In the Ladies Division Carole Meinhart of Pittsburgh the defending National Champion and former World Ladies Champion won the top honors with a score of 2637. In second place was Ann Sevey of Excelsior, Wisconsin with 3534 and third place went to Ann Corby of Boonton, New Jersey with 3532. Five points separated the three top contenders. This is tense competition and the issue remained in doubt until the last end of six arrows.

The ultimate goal of any archer is to win a place in World competition. The World Championship Target Tournament is sponsored by Le Federation International de Tir A l'Arc. (FITA). In 1957 the Americans swept the field carrying off individual and team honors in both Men's and Women's Divisions. This year at Brussels, Belgium the United States



Jim Thomas Photo

UNUSUAL TROPHY of the 1958 Archery Season was this 7 point doe deer killed by Harry Frank, left, of Dalton on the opening day. The deer weighed 132 pounds dressed and the rack was still in the velvet. It was killed with one arrow from 50 feet, the animal dropping dead within 40 feet of the spot where it was hit. Inspecting the unusual animal is Game Protector Billy Drasher of Schuylkill County.

Women's team carried off the team championship. This was the sole honor won by the Americans. The new World Champions are from Sweden: Stig Thysell and Mrs. Sigrid Johansson. Second place in the Men's Division went to Finland and Roy Matthews, the English Champion was third. A member of the American team, Jim Caspers of Racine, Wisconsin placed fourth, and Tim Cantwell, a sixteen year old high school youth from Kirkwood, Missouri who won a place on the American team at the qualification shoot at St. Louis in

June, came in fifth.

In the individual competition the United States Women placed second, third, and fourth. Ann Corby, Carole Meinhart, the defending Ladies World Champion, and Ann Sevey, in the order named. Fifteen nations were represented at the Tournament.

Each year brings new names to the top of the list and records are no sooner published until they are broken. Who knows? The Novice in your own club who eagerly listens to your instructions on how to shoot may be a future World's Champion.

ANYBODY SHOOT AN ANTLERED DOE?

Recent studies of female deer bearing antlers have shed much light on the effect produced by hormones on the development of antlers. Since female deer of this kind are exceedingly rare—about 1 to 10,000 to 20,000 bucks—the only opportunity for one person to see more than one such animal is through the cooperation of a vast number of hunters.

If you should happen to kill a doe with antlers this year, you are requested to telephone collect to Dr. J. Kenneth Doult at Carnegie Museum, Pittsburgh, Pa., MAyflower 1-7300. Dr. Doult and Dr. John Donaldson of the University of Pittsburgh Medical School are anxious to examine these unusual deer for scientific purposes.

Differences In Dogs

By Horace Lytle

DOGS are as individual as finger prints—just as people are. In expressing this individuality one of the most interesting studies involves the precocious youngster versus his exact opposite. That many young dogs develop rapidly does not seem too unusual when you consider that one year in a dog's life is equivalent to seven years for a man. In view of this (and thus stranger still) is how long it often takes for some dogs to develop at all.

Among the many precocious young dogs I have known, the most extreme example was a 6-months-old Setter over which I gunned in Mississippi many years ago. He might just as well have lived in Pennsylvania. Scarcely more than a pup, this fellow had everything. He found as many birds as any dog we had. He

was as staunch as any of them. He was sturdy, seemingly tireless. All business, he both looked and acted like an older dog. Perhaps most unusual of all, he was even steady to wing and shot. He had never really had any youth. Nor had he required any of the customary type of preliminary training. He seemed to know by instinct where to go to find game. In short, it might almost be said he went straight from his "nursery" to the hunting field.

He fascinated me and I studied him closely during a month of hunting. A year later, almost my first question pertained to this remarkable young dog. I was amazed to find my friend no longer had him. Instead of becoming a world-beater, the dog had burned himself out and had been given away to an old maid



as a pet. His master, I think, was more at fault than the dog. There should always be a "boyhood" for man or beast. Without it, something may snap. "Boy Wonders" are generally vulnerable. Amazing "quiz kids" have been known to turn out as "false alarms." If you have a dog that so qualifies, cherish and develop him carefully. Let him grow up. Don't try to cub his boyish buoyancy too soon. For when it is given you to be the master of a prodigy, treasure him—you won't have many such chances. Make the most of the few you may have.

The exact opposite of the foregoing type is the dog that develops slowly—sometimes so slowly as to leave you but little hope. Here is a case for caution. Don't give up until you are sure beyond question that the dog will never make good. But *when is that time?* It all depends—and the easiest thing you can do is guess wrong on this one.

Curiously enough, some of the greatest dogs have come from the ranks of slow-comers. Why that's possible I wouldn't know. But it's important for you to know it as fact. My first field trail wins were acquired with a bitch of this type. She showed nothing afield for almost too long to still hope. After which, though, she woke-up and showed plenty. The best bird dog I ever owned (count-

ing feathered game of all species) was a Setter bitch I had actually discarded—and later bought back!

A recent instance involves three young litter-mate Setters, just two years old the first of this year. A friend of mine bought one of them at three months. Knowing their blood, I cautioned him against any adverse decision short of three years. He threw in the towel at fourteen months! At the time even I found it hard to blame him. Yet that very dog was looking good just six months later. And by now he's truly a honey, at several months less than the three years I had urged his owner to wait.

Another of the brothers looked rather good right along and is especially good today. The third waited until his second birthday before showing what manner of dog he was. In field trial parlance, he is a Derby as this is written, but will be an All-Age by the time you read it. If by November he's still looking as good as right now, it will take some dog to defeat him—if any can.

So when you know the blood that's in a dog—and especially if the blood-behind-the-blood has been slow to develop—give your dog all the time he needs to "grow up." For if you don't, it could turn out as has happened too often and the dog you thus discard really may have been the best you've ever owned.

SIMPLE PRECAUTION MAY SAVE DOG

Many a kind person has fastened a ring or snap at the end of his dog's chain to a length of wire strung between trees or posts. Such an arrangement allows the dog to exercise and travel at will along the wire to sunlight, shade or water. But for lack of a precautionary measure this considerate action has been known to result in a minor tragedy. If a bolt of lightning strikes the wire it is likely to be conducted down the chain to the animal, electrocuting it. Should a live wire fall across a dog's run wire there could be the same unhappy result.

The possibility of such an occurrence can easily be eliminated. When both ends of the wire are fastened to an insulator, then to the supports, and an insulator is affixed to the dog chain also, an electric charge cannot be conducted to the animal. The simplest way to protect the pet or hunter from a charge of electricity would be to use ordinary rope or sash cord as the connection between the dog collar and the run wire.

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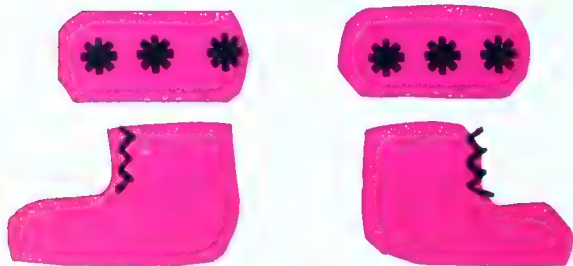
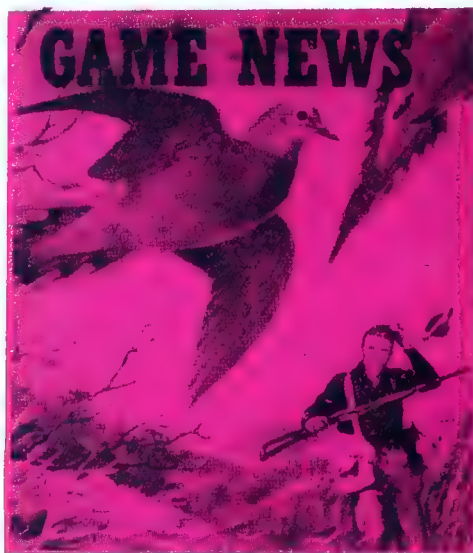
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PENNSYLVANIA GAME NEWS

DECEMBER, 1958

TEN CENTS





THE STORY BEHIND THE COVER

CHRISTMAS can mean many things to many people but perhaps it is best reflected in the face of a child, even as it was created by the birth of a Holy Infant so many years ago. And what boy ever radiates happiness more than the lucky lad who receives a lively new pup the morning of December 25th?

Every boy should have a dog, of course. Be it mongrel, pedigreed or just plain mutt, there is something in a puppy that will give new meaning to a youngster's outlook on life. Canine companionship is a wondrous thing, not easily defined. Perhaps it is the constant devotion and trust a dog places in his master. Or maybe it is just the fact that here is a friend who always remains faithful, never complains, and demands nothing in return except loving care.

There's more to Christmas, however, than toys and new dogs and gay decorations. Without the true spirit of generous giving, all these would be meaningless. And that's why, perhaps, this month's cover boy takes an interest in the family's window feeder for songbirds.

Not everyone gives thought to the protection and preservation of wild birds and animals. Yet almost everyone enjoys their presence and takes some satisfaction in seeing them, especially in winter. But for those who take an active interest by giving food and shelter to wildlife, the returns are great. The beauty, activity and song of birds coming to a backyard feeding station will turn the monotonous winter scenery into a constant source of pleasure.

Winter feeding of songbirds can be a blessing, as beneficial to humans as it is to wildlife. But if not conducted properly, it can be a curse to those you wish to help. Cracker crumbs and crusts of bread are poor fare for winter birds. And even the proper feed and feeders can act as boomerangs if you forget to keep the larder full or forsake it too soon. Furnish food every day—suet, sunflower seed, scratch feed, cracked nuts, and other nourishing ingredients; never discontinue feeding during the winter; and locate your feeder in a protected place.

Then on Christmas morn and every day throughout the snow season, the sight of chickadees, cardinals, downy woodpeckers and other interesting feathered friends will greet you regularly. Your boy or girl will gain a new insight of Nature—and of the One who controls it.

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EDITORIAL . . .

What of the Harvest?

IF WILD birds and animals escape death from predation, hunting, disease, starvation and everything else, they still must face the problems of old age. Even in a well-balanced population the old ones soon lose out and die.

One of the most basic natural laws of nature is that a surplus is always produced each year—a surplus that is doomed to die whether or not it is harvested by mankind. There is no escape from death; the only question is when will it come. This is the fact that all sportsmen and conservationists must realize if game is not to be wasted. The bird or animal will someday die, so why should the hunter not receive the benefit and get some good from meat, fur and feathers, as well as from the healthy sport of hunting it?

Most sportsmen do not get any real joy out of the actual killing of an animal. True, there are a few individuals who revel in killing for the sheer pleasure of killing, but these are in a very small minority. For most of us, however, the thrill of the chase comes from knowing that we have matched wits with our quarry and have defeated it in its own domain. The supreme moment comes when the trigger is squeezed or the arrow brought to full draw and we know the projectile has found its mark. There is little pleasure in the fact that we have killed; there is, indeed, a feeling of regret when we approach our fallen prey.

In any consideration of conservation, we cannot go wrong if we keep in mind the real definition of the word itself. Conservation simply means "wise use"—a use that implies maximum benefit to mankind without waste. Conservation demands, therefore, that we harvest our crop of game just as we harvest our crop of timber, cultivated grain, or domestically raised livestock. By avoiding waste which is the result of Nature's harvest, yet still maintaining sufficient breeding stock for the future, we have made wise use of a great natural resource—a use for which it was intended since time began.

—From *Arizona Wildlife News*.

Merry Christmas





Deer Hunting in the Years of 1888 to 1902

By William Anneman

PART ONE

DURING the year of 1888 I became nineteen years of age. As I look back in the retrospect, a story of my deer hunting experiences of those days is vividly recalled. A long talked of and planned deer hunt for the month of November kept me awake several nights before the date to leave. I had done considerable small game hunting, but was a novice at deer hunting. It was all new to me. Having been told that there were no more deer left in Pennsylvania, hunting for them was ruled out. It was most interesting to listen to talk about deer hunting by some of my experienced friends. They more or less kept their knowledge of them quite secretive, for they did not want others to know about their hunting grounds. They had mentioned that there were some near the Blooming Grove Hunting and Fishing Club grounds in Pike County.

It was generally believed that after 1880 the market hunters and lumber workers had killed off all the deer for food and market sales. The Blooming Grove Hunting and Fishing Club was said to own or lease about forty thousand acres of wilderness lands, upon which they had stocked deer and other species of game. The hunters familiar with the area claimed that a number of deer had migrated off the club grounds and were populating the adjacent hunting grounds.

The vast wilderness of all this territory was in a brush stage following the great lumber cuttings. As I recall those days these brush lands were

ideal for deer food and cover. The fact was not generally known, for not many people traveled about the wilderness areas in those days of horse and buggy transportation. A friend of mine, with whom I worked, knew the area and told me the story of the increasing deer in the region. He was a deer hunter, first class; likewise his older brother and father never let a chance slip by, if it meant a deer hunting expedition. It was finally decided that we would leave for the hunting grounds on November 14th, the day before deer hunting season opened.

I was instructed to take along plenty of ammunition; both fine shot and buckshot, for there were lots of grouse. The shells were to be different styles in appearance, so as to identify one from the other. This was good advice as I later learned.

When the hunting party was made up, there were three other men whom I did not know. After introductions, however, everything turned to the plans for the next day's hunt. I was a good listener, taking in every word. These men had hunted there the previous season and had killed a deer. It was decided that we would start for a certain location early the next morning. Levi was to take the *dogs*. Other members of the party were to stand at designated locations, selected by Bert, who, by the way, was regarded as knowing more about deer and their habits than his brother or dad. So off to bed we went at 10:00 P. M. There was no sleep for me, for the



BILLY ANNEMAN, of Lake Ariel, is a retired Pennsylvania Game Protector. He will be 90 years old this February and still takes an active interest in hunting and wildlife conservation. Mr. Anneman has hunted every year since 1881, except for the 1920 deer season when he had a bad accident which kept him off his feet until March, 1921. He takes great pride in the fact that he was one of those who helped make it possible for the Pennsylvania legislature pass the first hunting license law in 1913 and still possesses one of the first such licenses issued in the Keystone State.

excitement and tension had me all stirred up. I would dose off for a minute or two, only to be awakened by a deer jumping over me or otherwise disturbing my slumber.

When the call came for breakfast I was first to the wash basin. We were soon ready. Levi took the dogs on leash and Bert led the standers to their posts. We were instructed to stay put until picked up. The day was warm. We did not hear a sound for hours. I came close to falling to sleep despite my enthusiasm for the

hunt. Bert finally rounded us up and took us off to a new location. The results in the afternoon were the same. Old Sailor, one of the dogs, had done some cold trailing. His bugle held us to our posts until dark, but no deer were seen or heard.

The next day we hunted a new locality in the same pattern as the previous day. I was again placed on stand. Others of the party, except Bert, were taken further on. These men knew every foot of the region, but in Steve's opinion, they were not overly anxious that we should kill a deer. Apparently, they were most interested in the board and lodging money they hoped to get for our stay. This opinion was soon verified by events that came to light later on. We were hunting in the vicinity of Big Pond, later known as Fairview Lake. There was a hotel at Tafton, nearby, run by an old German widow, named Lobbis. A quartet of wealthy brewers from New York and Brooklyn made this place their headquarters. Most of their time was spent in drinking and making pretense of being hunters. No one ever knew of any of them having killed a deer, but they always took back with them lots of game, deer and bears and other game, if it could be bought. They claimed to be members of a shutzen bund and could do some fine shooting with their scoped rifles in the back yard, where they had installed a rifle range.

On this second day I kept my stand until 3:00 P. M. I had not heard a sound of man or beast in the meantime. Shortly thereafter I heard old Sailor giving tongue in a distance. I kept sharply alert, and soon became satisfied that whatever was on the move was coming my way. I had changed my position shortly before to a stand about one hundred yards away from the first station. All of a sudden the old dog got down to lively business. Short yaps were advancing toward me. In seconds I saw a deer headed toward

me. The brush was quite heavy, and I lost sight of it until it leaped over the roadway about 35 or 40 yards away. I fired, but the deer kept right on going. I fired my second shot. Two large oaks took most of this load. I ran to where the deer crossed and collared the dog, which was standard practice. I had quite a time to get him on leash. Then I checked on my shooting, for I felt sure that I had hit the deer. In the meantime Levi came and took the dog. Our check discovered considerable hair from the deer, and two jumps beyond there was blood.

Soon our party came in for council. We decided to smoke and then follow the deer with the dog on leash. Three of us were to try to head off the deer, if it was still on its feet. This is what happened; whether by carelessness or design, I can only assume, Bert let the dog get away. The dog made straight for Big Pond

Lake. One shot was heard and the dog quit tonguing. We soon got together and hurried to the lake. Old Sailor was on the shore of the lake pulling at the entrails of a deer. The interlopers were gone and so was my deer. I was terribly disappointed, but not discouraged. This was the first deer I ever saw in the wild.

That night at the hotel I talked with one of the natives, who told me that this conduct was common practice. It had been going on since he could remember. So I began to learn that in the deer hunting fraternity, there were others not sportsmen. My lesson was worth while in future years, as I later became a game protector. After we had our supper we were soon in bed, for our hosts did not have much to say.

Next day we started out in low spirits. I became lost from my companion. The weather was threatening and became foggy. This added to my

HARDY HUNTERS of the early 1900's pose in Pike County woodlands. From the left: Patrick Cusick, Scranton, famed as the fighting sergeant of the Argonne Forest during World War I; William Bird, one of the early organizers of sportsmen's clubs; Billy Anneman; and George Schwartz, a deputy game protector.



bewilderment, but I did not get panic stricken. I took a straight course and finally came to a stream. I followed it until I came to a road. I then ran into the first hunter I saw in the woods since the start of our hunt. He, too, had become lost in the fog, but now had his bearings. He ask me where we were from and where we were staying. He knew the place but not the people. I learned from his name that he was of Polish descent. He told me in a pleasant attitude where he lived, and added that his people would like to have hunters come and stay with them. I informed him that we would call upon his family and consider his hospitality. He remarked that there were deer there.

I started back through the woods en route on my return to my boarding place. I was the last one to return in. Already a party was being organized to search for me. In the meantime it began to rain. We were all tired and was glad that it was the end of that day. More or less it had been uneventful.

This was our last day's hunt here, for Steve said: we are leaving tomorrow. There is no chance here. We all agreed. Before we leave, however, we want to go over and look the place over you have found Bill, through the hunter you met in the woods. We liked the country and could learn it without the assistance of some of the experience, we had gone through.

We found the Polaski place and all the family at home. The father and mother could not speak much of the English Language. The two young men and two sisters spoke it well. This family came to America in 1868 and worked hard to establish a home. They had carved out a little farm in the wilderness, among the rocks and scrub oaks. How they made a living is a wonder! They now had twelve acres cleared and were farming it. About the same amount was partly cleared and used as

pasture land for their stock, which comprised two fine cows, a large flock of chickens, three pigs and a mule. Everything was nice and clean in the house. In the basement there was a large fire-place and fire-wood, piled up to the ceiling. There was a table, benches and chairs. We were assured that we would have plenty to eat. The beds were all a tired hunter could relish after a hard day's hunt. So arrangements were made to bivouac with these folks the next hunting season. The family was asked to come to Glen Eyre, R.R. stop to get our equipment. They had only a buckboard and a mule to haul it. We would walk the eight miles to our rendezvous for the hunt.

The ensuing year was a long one for me. Finally, November 15th, was only one day off. We traveled as agreed upon from the Erie R.R. Station in Scranton to the Glen Eyre stop in Pike County. Our luggage was picked up as planned and we trekked the eight miles to camp in about three hours. A grand welcome greeted us. I suppose these lonely people were glad to see us and to realize that they would make a few dollars in real money.

The table was loaded with all kinds of good food. When we finished, it looked different, for five hungry men had just negotiated eight miles on foot to reach this haven of welcome and satisfaction. Our party had been increased by one Dick Edwards, an old fox hunter. He proved to be a good scout. After the smokes and the usual bull session, we hit the feathers to dream of the following day's hunt.

We were awake at dawn. The fire was roaring in the fireplace and breakfast was about ready. Fresh pork and pancakes greeted us on the table. Then we were off for the hunt in our new locality.

Bill and Tony joined us, remarking that we were strangers in the locality and may become lost. Soon we were trying to rout a deer in very

likely looking places. We kept the dog with us, for the woods was very dry and noisy. Steve remarked that we had better hunt up the low lands, where there may be a swamp. We soon observed more green in the foliage. Old Sailor was turned loose. Being a good cold trailer, he was soon busy. It was not long until we heard his foghorn voice, heading toward the swamp. All of a sudden his bellow turned to a yap, and we knew then that he had jumped a deer. One of the party saw the deer's flag and said it was heading toward the Blooming Grove Creek. None of us being on stand dampened our hopes of getting this deer. So we called this a day and started back to camp. Tony, Levi and I took one direction and the other members of the party took another. Levi and I changed loads to fine shot and killed three grouse on the way back. They were very plentiful. We had flushed many that day. Being satisfied with what we had seen of the new territory, it gave us hopes of success. Steve was

praying for snow, for he cared little about dog hunting. I did not take to dog hunting too well either, so Steve and I became fast friends over the years that followed. I enjoyed hunting with him more than anyone that I ever hunted with.

From this point I shall try to narrate on my general observations that followed in the next several years, for I had become an enthusiastic deer hunter. I saw them rise from a few to the great herds in my life time. My deer hunting took me into much of northeastern Pennsylvania and elsewhere. In the early days of their come back much unlawful hunting was done during the late summer and early fall at salt licks. Most of the natives hunted them for meat and for sale.

We finally killed a nice buck at our new camping region after several days hunt. The following year we killed two bucks and a doe. On our next trip our party encountered the following experience while scouting around a small lake, known as Mud



Pond. Dick and Frank saw tracks of deer and traces of blood in the snow, leading into the swampy surroundings. They circled the area and found no trace of the deer leaving. Night came upon them, so we planned to hunt the area out the following morning. Levi took the trail while other members stationed around the swamp. The deer was jumped and came out to Frank, who shot it in the neck. At the crack of the shot some one let out a yell. We answered. Soon two hunters put in appearance, and claimed to have wounded the deer. The deer was dressed out, and we located three buckshot in the carcass, which would have likely been fatal eventually. The party yielded the deer

despite Frank's protest not to. The hunter's conducted themselves as good sports, and accordingly we chose to do likewise. These two hunters were the first we had encountered in the new territory in all our hunts there.

It was evident that Frank was not satisfied with our having turned the deer over to these hunters, for he had his duffel packed and left us that evening. We did not see Mr. Week anymore, but all of us agreed that he was a poor sport. We sent him a deer when we broke camp, and he gave a big free lunch at his hotel. Steve later told us that he had given up hunting thereafter.

... To Be Continued



STILL ACTIVE in the cause of wildlife conservation despite his 89 years, Billy Annemeyer is pictured on a winter feeding mission last winter.



A Hunter Looks at Pennsylvania Deer

By John B. Miller

FOR three hours, that bright December morning, I had pussy-footed along the side of the ridge, six or eight hundred yards from the top. The last half of the trip had been down a hanging valley caused by the presence of a secondary ridge lying south of the main one. The light breeze had been out of the west when I started my hunt on this opening day of Pennsylvania's deer season, but it had shifted toward the north and picked up considerably. I turned in that direction and climbed to the top of New Berlin Mountain, figuring that by now I could work back to the

east without notifying every buck in the township that I was there. Besides, I'd left my lunch in the car and was beginning to notice a vacant feeling near my middle.

Quiet traveling was practically impossible. The loose carpet of oak leaves lying under the open timber of the ridge was inches thick and dry as tinder. Under such circumstances the only practical method of still hunting was to walk as quietly as conditions permitted for a few steps; then look like a stump and listen for several minutes before moving again.

JOHN B. MILLER is a professor of electrical engineering at Bucknell University, an avid hunter, and an expert on sporting arms and ammunition. He regularly engages in competitive target shooting. A graduate of the Game Commission's training school, he served for a short time as a Pennsylvania Game Protector in the late 1930's.

By some peculiar quirk of fate the particular spot I had selected had been avoided by other hunters that morning. In an area where big drives and crowds of hunters are the rule. I had not seen another person since leaving the car. I might add that by noon the place was alive with eager nimrods.

I was slipping my left foot under the carpet of noisy leaves, preparatory



THE HEAD of my 1957 buck was nothing to brag about, but it was better than ninety percent of those seen on my "inspection trip."

to making another move, when a distant rustling called my attention to a six-pointer a hundred yards away and trotting easily in my direction. Sneaking the safety off my Springfield, I picked him up in the scope with as little motion as possible and waited for him to stop. The first halt was made with nothing much but his rump visible thru the timber, but at the second he exposed nearly his whole side. The thought that flashed thru my mind at the moment was: "It's going to be a hellava job getting you out of here alone." Then the .30-'06 recoiled and the buck bounded away, swinging around me to the north.

Using my very best rapid-fire technique, I chambered a fresh round and picked him up again, squeezing off a second shot just as a large economy sized white oak jumped between us. Then he disappeared. For a moment I was completely flabbergasted. I'd missed an equally easy shot at a Wyoming mule deer two months earlier. Now I'd done it again. But that first

shot couldn't have missed him! The crosshairs were on just the right spot when the rifle cracked. Then, recalling that his takeoff had been humped up and tail down, I picked up my empties and started to see what story the leaves where I had last seen him would tell.

Reaching what I thought was the place he had been, I found no signs of his passage, but some thirty yards beyond I came on the scuffed leaves and blood trail that told the story of his going. At that moment three fast shots sounded in the direction he had taken, and not very far away. "That's the end of my buck, but I'll have a look anyway," I thought as I continued on the trail. Rounding a little knoll, fifty yards farther on, I almost stumbled over him; stretched out and completely lifeless. I hadn't lost him after all.

This time I had left my hunting knife at home, so I did the dressing job with my pocket knife, as I had done dozens of times before. Although I could have guessed what I'd find in

it, I examined the paunch from force of habit. The forested ridge where he was shot varied from one to two miles in width and lay between fertile and intensively farmed valleys, so there was likely to be corn. It was there. Also the tender shoots of young wheat and a few teaberry and squawberry leaves. The remainder of his breakfast had been mostly clover and the brouse of various "sweet" woods. He was "as fat à butter" and, by the time I had dragged him off the top of the ridge and hidden him in a little hollow under a low hemlock until I could bring the car about three miles nearer, I knew he was heavy enough.

Fifty minutes of fast walking took me back to the car and the rest of the folks who had started out with me. I really had dedicated this first morning to hunting with my two youngest sons and the wife of the older of them. At my suggestion, they had spread out along the ridge from the car and hunted west, while I made the long sweep mentioned before in hopes of chasing something wearing antlers their way. I found them finishing their lunches and, in answer to questions about my bloody hands, told a yarn about cutting myself. They didn't buy that, so I grabbed a sandwich and we drove to the point of entry to the mountain nearest my buck and brought him out. Loading him in the station wagon, I escorted him home to be skinned while the boys continued hunting.

So that was it! For the first time in my life I had the whole season to hunt if necessary and what had I done? Finished my hunting the first morning! And it all happened not more than five miles from home. A smart hunter doesn't pass up many chances at good legal buck in Pennsylvania these days, but I was almost sorry I hadn't missed.

I'm not bragging about the rack on that buck. I called it a five-and-a-half-pointer. But he was fairly heavy as deer in this area go. With head,

hide, feet, and all other excess baggage removed, he weighed in at one hundred and one pounds. Having seen hundreds of deer go thru checking stations, and having noted the estimated weights put on the tags by their owners, I've learned to discount the average hunter's weight report by about twenty percent and believe only what I see on the scales. Also, I've learned to estimate deer weights fairly well myself. Of course, the weight marked on the tag is directly proportional to the distance from the road at which the buck was killed. I don't

QUEBEC BUCK taken during 1957 season in Canada shows what can happen where food is plentiful. Wolf packs and hard winters weed out the weaklings, as nature practices selective breeding.



know what the actual figures are, but I doubt if the average weight of the antlered deer killed in Pennsylvania this fall will run over one-hundred-ten pounds. Probably the antlerless jobs will run nearer eighty-five. Those are hog-dressed weights. Guessing again, I'd say that the averages of those coming out of the big woods have dropped close to twenty pounds in the last thirty years.

Some of the background facts regarding Pennsylvania's deer herd might be worth considering. When I was a boy, living on a hilly farm in the North Tier area, deer were practically a negative quantity. In most of the county they had been hunted to virtual extinction. Then the big timber—hemlock in the hollows and hardwood on the ridges, quite frequently—was cut off rapidly. Dense second growth hardwoods—beech, birch, and maple, with a scattering of other woods and forest weeds—sprang up. The famous "buck law," protecting the breeding doe, and the almost

unlimited food available, presented such ideal conditions that—before most of us realized it—the deer herd was not only too large, but was starting to eat itself out of house and home. With variations in timing and other conditions, this situation was arising or had become apparent in other parts of the state.

A few far-sighted game managers recognized the danger and attempted to avert disaster by advocating antlerless deer seasons. The organized sportsmen raised Holy Ned and the unorganized shouted their deer-ignorant heads off. The fellow who participated in a "doe season" was the next thing to a Benedict Arnold.

As I recall it, the saturation point in my county was reached in the early thirties. It had arrived earlier in the south and central parts of the state. The young trees that had provided browse before, and had not been chopped off by the growing deer herd, were getting to the pole stage. The deer, particularly the small ones,

POLE STAGE forests, typically found over large areas of Pennsylvania, don't offer much, if any, food for a winter-hungry deer.





SEVEN BUCKS hung before this motel during the 1957 season. Five of them were "spikes" and the other two small "wyes."

could no longer reach the tender shoots. The observant outdoorsman could see a deer line in almost any young forest in the state.

Then about three hard winters came along in a row. After each of them a few, or perhaps dozens, of bags of hide containing deer bones were to be found in deep valleys and along mountain streams. Still the average hunter refused to admit that a surplus existed and some otherwise competent biologists insisted that it was a parasitic fly and not starvation that caused the deaths. (It is quite likely that it was a combination of circumstances—starvation so weakening the animals that they were unable to combat the nose fly.)

From the middle of December, nineteen-thirty-five, to the middle of the next March, half a dozen or so of us did our best to feed whatever deer we could reach in the county referred to. Snow was from two to four feet deep on the level. For days at a time the temperature stayed below zero. We drove our cars as far into the woods as we could on the CCC roads and other trails, then packed corn and alfalfa to the concentration areas on our backs. I spent so much time on

snowshoes that winter that I waddled when I tried to walk down the street in town.

No one knew what the best "artificial" food was, so we used what we could obtain and hoped it would do the job. Browse was cut where available, but much of the forest had passed that stage. Besides, the browse that was available was largely in areas away from the deer yards and cutting it half a mile from the yards did no good. In the yards themselves everything green, including hemlock, laurel, rhododendron, and other shrubs not normally eaten in quantity by deer, were stripped as high as an animal could reach by standing on its hind legs. Branches as large around as a man's thumb were devoured completely. Obviously, the youngsters could not reach as high as the others, so they gave up the ghost first.

Toward spring many of the deer were too weak to run out of the yard when we approached. If they did they might merely flounder around in the snow and lie there panting, waiting for the dark angel. It wasn't a pretty sight. When the snow finally melted off, the stench in some of the valleys was terrific. But, in spite of all this,



ROAD HUNTERS are too plentiful these days. At this point one group of men fired almost 70 shots at a buck on the opposite hillside. The "battle" lasted over ten minutes with many of the bullets missing by 20 feet.

most of the fellows who fought against herd control didn't get off their big, fat fannys or stir away from the stove at that time of year to observe the things we saw day after day. Unless they could spot herds every time they stepped out on their front porches there were not enough deer.

Eventually some of the skeptics were convinced and more antlerless seasons were declared. These helped the situation greatly, but the effects of inadequate food supplies still exist. Over the years the deer have become smaller, racks have been less and less imposing, and the farmer's damage complaints have continued. Instead of finding our best specimens in the remote forest areas, we now find them in the farm woodlots, from whence they forage the neighboring fields at night. This last was the kind of deer I had collected that morning.

Before the season opened I had made tentative plans to take our fifteen-foot travel trailer and go back to that north-tier county for a few days hunting in my old stamping ground. Now, with hunting all done for the season, I decided to take a trip up there anyway—just for old times sake. Early the first morning of the season I

gathered up some of my cameras, put on my hunting clothes, collected my field glasses and spotting scope, tossed a varmint rifle in the station wagon, and headed north. I enjoyed the trip and spending the night at the home of an old hunting and fishing pal, but I saw several things I didn't like.

Driving over the old turnpike I kept close watch on the forest conditions as well as on the deer hanging at the dozens of camps and being carried on the cars that were returning from the area I was interested in. This was not an intensive research expedition, with detailed and accurate records, so I'm not making any more general statements about deer sizes. I'm just telling you what I saw.

Of all the dozens of dead bucks observed during my two-day trip, only one had a really nice rack. Only two or three were as large as the buck I had downed the first day. At one motel five of the seven deer on display were spikes and the other two carried skinny "wyes." At another, one had a fair "wye," one a spike, and one had a badly deformed "wye." At one camp the only two hanging were "spikes," while another camp, in the edge of the big woods, showed five

deer, four of which in the spike class and the fifth a "wye." This, quite generally, was the pattern throughout the area. The deer seen on cars were no different. Perhaps these folks were hiding their big deer, but that's not the way the hunters and fishermen I know operate.

Without doubt many of these bucks were youngsters. I didn't study their teeth to find out. But in my book one that sports well curved antlers ten or twelve inches long is likely to have seen more than two summers. Why didn't they have better racks? Guessing again, I'd say they just didn't have enough "ump" to grow them when spring came. Summer food seldom is any serious problem for deer and those killed in the fall may be sleek and fat. It's what they find to eat in January, February, and March that tells the real story. If they have to spend May, June, and July staggering back from the brink of the grave, they have that much less time left to grow and attain full vigor for the family duties they have to attend to in the fall. The chances are they will father still smaller deer for future generations. And next spring's fawn will be smaller still because it's mother was half starved throughout the gestation period and may even be unable to feed it properly after it is

born. It's a vicious cycle that can be broken only by making sure there are no more deer in any area than the range can support properly.

Fortunately, many of those who fought the earlier antlerless deer seasons so bitterly are beginning to understand the situation, but there still are some die-hards that refuse to believe what they see. Others are learning that a smart old does can be just about as hard to outwit as her husband and that the principal reason it's easier to kill an antlerless deer is because there are too many of them.

My observations about the situation in this particular area are in agreement with those of many other outdoorsmen. A local taxidermist confirmed my report, but he added that he had received many fine heads for mounting from other parts of the state. In fact, he showed me stacks of dozens of them in his workshop and storage room.

And so I came back down over the old pike on the second day of my trip feeling somewhat let down and depressed. I'd seen positive proof of one of nature's laws that I'd been aware of all along. But remember, I'm not making any disparaging remarks about Pennsylvania's deer herd. I'm just telling you what I saw!

TYPICAL RACK of many seen on the inspection trip were these spikes.





WALKIN' SHOES

By NED SMITH

Winter Birds of Field and Fencerow

1. What winter bird has an exceptionally heavy, ivory-colored bill?
2. What bird is almost identical to the common crow, except that it is smaller?
3. What gray and white bird is commonly known as the "snowbird?"
4. Do prairie horned larks breed in Pennsylvania?
5. What sparrow has a small dark spot in the middle of its breast?
6. Where does the horned lark get its name?
7. The redpoll is a common winter visitant. True or False?
8. Snow buntings are fond of dense thickets. True or False?

THE sudden disappearance of many familiar birds led the folks of olden times to believe they had flown to the moon or buried themselves in the mud of a lake bottom to spend the winter. Today we know that the wintertime scarcity is due to the fact that they travel southward to more hospitable climes when autumn puts a nip in the air.

Fortunately for us, our scanty avian population is bolstered by an influx of birdlife from the northern Canadian forest and tundra regions that are also seeking a milder climate in which to spend the winter months. Such rare visitants as snow buntings, redpolls, pipits, and evening gros-

beaks give local bird watchers a renewed interest in life.

There are other birds we might meet up with on a midwinter hike across the stubble. A number of red-tailed hawks, sparrow hawks, and marsh hawks remain with us to keep the rodent population on its toes. Some years snowy owls put in an appearance. These birds have been covered in previous articles. Meadow larks, mourning doves, redwings and others are irregularly seen in winter time. And then there is our permanent population of pheasants and quail. However, the species described and illustrated are typical winter birds, the very mention of which brings to mind bleak, wind-swept hills and brown weeds poking stiffly out of the snow. How many can you find in the next few months?

1. Prairie Horned Lark. Slightly larger than a common sparrow this bird frequents bare, windswept fields where it walks or runs about in search of food. It commonly mounts a clod or corn stubble to look around, but doesn't perch in trees. A black crescent on its breast, black patch behind its eye, and black crown patch terminating in a pair of "horns" are distinctive markings. The upperparts are dull grayish brown mixed with dusky brown and lightly washed with red-



dish. The forehead and the line over the eye are white, sometimes tinged with pale yellow, the underparts are white, and the sides are marked with pinkish brown.

These birds breed in Pennsylvania. A close relative, the northern horned lark, sometimes invades our state in winter. It can be distinguished by the more intense yellow of the line over the eye.

2. Pipit. This bird appears irregularly in Pennsylvania, sometimes as a migrant and sometimes as a winter resident. It frequents the same bleak, windswept fields favored by the horned lark and has the same manner of walking and running. The pipit is the size of a large sparrow, slim in build, with a slender, pointed bill. It is a soft brown above with a pale line over the eye. The outer tail feathers of the dark tail are edged in white. The underparts are buffy, streaked with brown.

3. Slate-colored Junco. This plump sparrow-sized bird is popularly known as the "snow bird." Its upperparts are slate gray, the underparts up to the

breast are white. Its bill is flesh-colored. In flight the junco shows a great deal of white on the outer tail feathers.

This bird is frequently seen in the woods but seems to prefer old fields near a forest edge where there is an abundance of weed seeds.

4. Tree Sparrow. This small, long-tailed sparrow can be readily distinguished by its bright rusty brown cap, yellow mandible of the bill, and small dark spot in the middle of the breast. Its back is reddish brown streaked with dusky and the wing is crossed by two prominent white wing bars.

These cheery birds converse among themselves as they feed. At a distance a flock sounds for all the world like the tinkle of tiny bells as they busily scour the fox-tail grass and lamb's quarters for seeds. They are often seen in company with juncos.

5. Red Poll. These little finch-like birds are quite rare in Pennsylvania, but some winters they appear in large flocks. They are brown above streaked with darker. Their rumps are pale

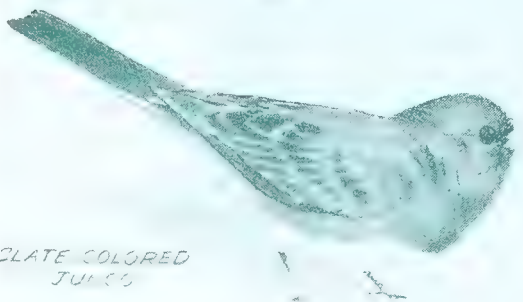
1. FRANKLIN'S
HORNED LARK



2. PIPIT



3. SLATE COLORED
JUNCO



4. TREE
SPARROW



pink and their foreheads stained with bright rosy red. The sides are streaked with dark brown. The chin is black and the males' sides and breasts are tinged with rose. A curious tuft of bristly feathers hides the nostrils.

6. Evening Grosbeak. A flock of these handsome visitors from the North Country is sure to stir up some excitement among local bird watchers, for they are far from common in Pennsylvania. The winter of 1957-58 was a banner year, tremendous flocks having been observed throughout the state. The male's head is nearly black, gradually blending through olive to yellow on the rump, shoulders, and underparts. The forehead is yellow and a large patch on the black wing is immaculate white. An unusually heavy ivory-colored bill adds to the bird's distinctive appearance. The female is considerably spotted and marked with white and gray.

These birds are inordinately fond of such civilized fare as sunflower seeds and soon become quite addicted to backyard feeders, much to the delight of their human benefactors.

They usually remain with us until well into spring.

7. Snow Bunting. It is unfortunate that snow buntings are so rare in Pennsylvania, for the sight of a swirling flock of these predominantly white creatures is pleasantly suggestive of a miniature snow flurry. They are seed eaters and, like so many visitors for the Far North, prefer the wide open spaces.

In winter plumage the snow bunting is predominantly white except for its rusty brown crown, back, and rump, its rust and black inner wing feathers, and white-edged black primaries and tail feathers. A rusty bar crosses each side of the breast and another marks the rear edge of the ear patch.

8. Crow. This big black fellow is happy anywhere, and that's just where you'll find him. His raucous "caw" can be heard from every quarter on a clear winter day. His big cousin, the raven, can be distinguished by several features other than size. First of all, the raven croaks, he doesn't caw. His tail is not rounded

but has a wedge-shaped tip. Finally, the raven is seldom found away from the wildest mountain country.

Another relative, the fish crow, occurs in numbers along the Susquehanna and Delaware Rivers, but even in those localities many people are not familiar with this bird. It can be distinguished from the common crow most easily by its call, which is an abbreviated, nasal *car* instead of a long, clear *caw*. While not strictly a bird of the "fields and fencerows" it prefers the beaches and mud flats

along the water to the inland forests.

ANSWERS TO QUESTIONS

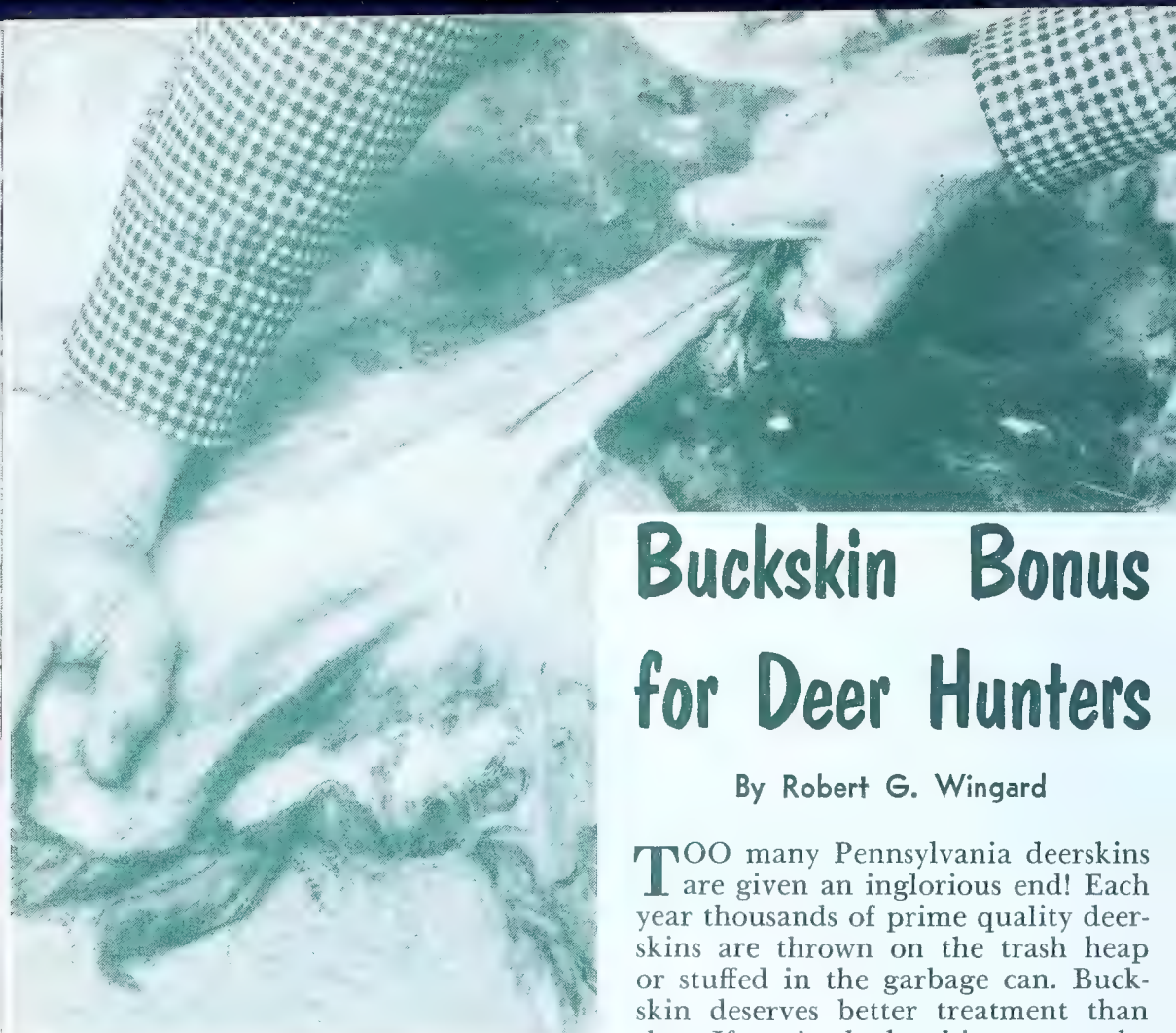
1. The evening grosbeak.
2. The fish crow.
3. The slate-colored junco.
4. Yes.
5. The tree sparrow.
6. From the two horn-like tufts on each side of its crown.
7. False. It is a rare and irregular winter visitant.
8. False. They prefer open fields.



WHERE, OH WHERE WAS GAME NEWS IN NOVEMBER

We apologize for the long delay in getting the November issue to our subscribers. Due to totally unexpected delays in delivery of illustrations by a commercial art studio for the 64-page special section containing the Commission's Biennial Report, we were three weeks late in getting the magazine on press.

Our only consolation is that so many of you wrote us letters in such strong language (and we don't blame you). Thanks to the hundreds of readers who let us know they missed GAME NEWS last month—and to the thousands of others who were so patient in awaiting their copy.—The Editor.



FLESH AND FAT have a natural tendency to stick to the hide. Clean this material away to avoid spoilage while shipping.



Buckskin Bonus for Deer Hunters

By Robert G. Wingard

TOO many Pennsylvania deerskins are given an inglorious end! Each year thousands of prime quality deerskins are thrown on the trash heap or stuffed in the garbage can. Buckskin deserves better treatment than that. If you're lucky this season take advantage of the "buckskin bonus." It's yours at little extra time and cost. Plan now to give your deer hide the care and treatment it merits.

Buckskin has a rich, historical tradition. Indians stalked Pennsylvania woodlands in deerskin moccasins, and they had many other uses for the tough, pliable leather. Early settlers wore buckskin breeches, and other leather apparel. These home-cured skins were strictly for practical use because they gave excellent protection and warmth.

Nowadays buckskin is a choice leather. There's almost no end to the useful and durable articles you can have made from a deer hide. Best of all you can enjoy these luxury leathers at a fraction of the "ready-

ORDINARY TABLE SALT is a good preservative. Usually, one pound is enough to cover a hide but use more if needed so that all areas are covered.

made" price. Deerskin is valuable if you use care.

Bullet or arrow holes can't be avoided; neither can scars from buck fights and other natural skin flaws. But lots of serious hide defects come from careless dragging and haphazard skinning. Use care in skinning. Most of the hide can be pulled or worked loose with your hands, or by using the butt of a hunting knife. Too many cuts make the hide worthless so use the knife blade sparingly.

After skinning lay the hide flat with flesh side up. Remove surplus meat and fat without excessive scraping. This fleshing helps prevent fat burn on the hide, and it will be less odorous while shipping to a processor.

A box or two of ordinary table salt is good as a preservative, for it prevents spoilage and deterioration of the hide. In the cold of winter your deer hide is OK, but don't depend on this to keep it while en route through the mail or express.

Sprinkle salt liberally on the hide. Then work it into the hide with your hands. It's especially important to cover the edges, around the legs, and at the tail. A pound box of salt is enough for a small to medium hide, but you'll need two boxes for a large hide.

Next, fold in the edges of the hide, and make a tight roll. Notice the folded margins form the edges of the roll. Folded edges keep the salt next to the flesh side and no salt is lost while shipping. Tie in a bundle and your hide is ready to be shipped.

Local taxidermists may tan hides, or they can arrange to have it done. Many companies specialize in deer-skin work, and their advertisements appear in outdoor magazines.

Tanned buckskin can be obtained in a variety of color finishes. The usual rich tan and dark mahogany brown are common. Special treatment from some companies results in gray, white, and many shades of brown.



WORK SALT along the edges where the hide may have a fold or roll. Be sure to cover the legs and tail area.

ROLL HIDE into a bundle after folding in the edges. Tie with a piece of cord and your deerskin is ready to ship to the processor.





What'd It Cost?

By Bill Walsh

Illustrations by Nick Rosato

IN Pennsylvania, during the 1957 hunting seasons, a total of 3,397,771 separate game birds and animals were harvested. Everyone knows all this cost a lot of money. Guns, hunting camps, gas for trips, clothes, boats, licenses, decoys, and a host of other items figured in the total.

But, for the heck of it, this article will attempt to determine just how much it cost to buy only one item—the ammunition necessary to bring these almost 3½-million game birds and animals to bag.

Mind you, now, we're not going to count practice shots for sighting-in—or misses—or shots that crippled and didn't kill. Right now we want to find out—just to see how impressive it is—how much the ammo cost to place one killing bullet or shot charge into each harvested piece of game.

We already know—figuring one shell or cartridge for each piece of game—that the total number is the above-mentioned 3,397,771 plus an estimated 25,000 representing that many legally-killed deer which suc-

cessful hunters (shame on 'em) failed to report. This comes to 3,422,771.

Figuring the average cost of the average shell; considering what calibers and gauges are used most; and adding a dash of common sense to the mixture, we've arrived at an average figure for each species. We think we're pretty close.

Let's take the deer first. With .30-06, .270, and similar hi-power cartridges at \$4.55 a box of 20 and .30-30's going for \$3.60, it's easy to arrive at an average cartridge cost of 21 cents each. Since few big-game hunters load their own but since those who do must be taken into account, lop this figure to 20 cents. A bit of arithmetic will then show that the cost of cartridges for the deer hunt ran about \$26,000—JUST for the killing shots.

Personally, we fired six this past season to get our own buck—and one hunter wrote us to say he had used up 47 cartridges during the buck and antlerless deer seasons. In questioning hunters of our own acquaintance

(not counting the one with the spray-type spewer of 47 bullets who wrote in) we came up with the following dope:

Of those questioned (25 of them) the average number of cartridges used for sighting in was three. This was mainly because 18 of the 25 had done **NO SIGHTING-IN** at all. Of those who got deer, the average number of cartridges fired per deer killed was 3. Of those who shot at other deer (that they missed or failed to bring down) the average number of shots fired was 5.

Of course the species that made the most impressive total in the "harvested" column is the dependable cottontail rabbit. He went into the 1957 hunter's gamebag to the tune of 1,455,862. Averaging out the cost of shotgun shells at \$3.40 for 12 gauge, \$3.15 for 16 gauge, and \$2.95 for 20 gauge we arrive at a 13 cent average. Since most guns are in the 16 and 12 gauge categories we conclude with a 16 cent average cost for shotgun shell per rabbit killed.

Now in order not to bore you with the many details that went into the



construction of the accompanying chart, let's skip over most of them, pointing out only the most obviously pertinent.

The 14 cent figure for squirrels was arrived at because some squirrel shooting is done with the .22 rifle, a fact which would lower the average cost as compared with rabbit shooting, for example.

The six cent figure for the raccoon is, frankly, an educated guess. It has to be lower than the others because many a 'coon meets his end at the hands of the 'coon dogs while a great many others are dispatched at the end of a hunt with an inexpensive .22. Possibly more are killed by shotguns than is realized, but a figure of six cents probably assures that if we are in error it is on the low side.

The 15-cent tag on wild turkey takes into account the occasional scope sighted .22 or .222 or similar cartridge. Admittedly these are the weapons of many a turkey hunting "specialist"—but the average Joe carries the same shotgun he uses for upland game of other species.

The 13 cent average for quail is



arrived at by remembering that the serious quail shooter uses low base No. 8's that are a bit easier on the pocketbook than scattershot in other varieties. The figure on doves used the same reasoning.

The average of 15 cents for woodchucks takes into consideration the facts that some hunters economize by handloading (although economy is not necessarily the principal reason for handloading) while others prefer the stalking-type and less expensive .22 style of hunt.

The figure on wild waterfowl—18 cents—reflects the facts that most duck guns are 12 gauge and that many waterfowlers go in for Magnum loads and even in some cases beyond into 10 gauge and 10 gauge

Magnums for the long shots.

Now, adding all these figures together gives us a whopping total of over a half million dollars—\$520,508.58 to be exact.

How much more is spent on crowd shooting, fox hunting, sighting-in missing, serious target shooting, just plain plinking, skeet, or trap shooting—we make no attempt to arrive at. But you can bet it's many times the impressive cost of the ammunition. Pennsylvania hunters had to burn up in order to harvest the total 195 game bag.

One other thing is also for sure—telling 'em about it isn't going to stop 'em from spending the same amount next year because they enjoyed every penny of it.

<i>Species</i>	<i>No. Harvested</i>	<i>Cost Per Cartridge or Shell (Cents)</i>	<i>Total \$</i>
Deer	130,000	20	\$ 26,000.00
Bear	294	20	58.80
Rabbits	1,455,862	16	232,937.92
Hares	1,614	16	258.24
Squirrels	728,342	14	101,967.88
Raccoons	139,397	6	9,363.82
Wild Turkeys	16,156	15	2,423.40
Ruffed Grouse	41,694	16	6,671.04
Pheasants	465,955	16	74,552.80
Quail	12,057	13	1,567.41
Woodcock	9,854	13	1,281.02
Rails and Coots	5,609	16	897.44
Wild Waterfowl	64,625	18	11,632.50
Woodchucks	311,497	15	46,725.45
Doves	39,699	13	5,160.87
Grand Total			\$520,508.58





PENNSYLVANIA GAME COMMISSION

Financial Report for the Fiscal Year

JUNE 1, 1957 TO MAY 31, 1958

By Joseph J. Micco Comptroller



THE Commission is again pleased to present its annual financial report for the information of the sportsmen and the general public.

The annual reports generally follow a uniform pattern to enable those interested, once acquainted with the format, to readily understand succeeding reports and, should they desire, to quickly and accurately make comparisons with those of prior years.

When the need arises, new schedules are added as well as supplements to the existing schedules that comprise these reports. This to assure the presentation of a complete and comprehensive report each year.

In line with generally accepted governmental accounting practices, this report includes a detailed statement of revenue and expenditures (Schedule IV), a statement of the present financial position (Schedule I), a statement of expenditures for each major program of the Commission (Schedule III) and other supporting data, graphs and charts.

An examination of Schedule No. IV discloses that the Commission be-

gan operations June 1, 1957 with a net balance of \$4,326,246.31 available for expenditure. Revenue from all sources during the year amounted to \$5,324,410.70 making a grand total of funds available during the year of \$9,650,657.01. The total expenditures by the Commission and other State Departments amounted to \$4,669,033.81 leaving a balance of \$5,109,842.37 in the Game Fund as of May 31, 1958.

The cash balance at the end of a fiscal year is not all surplus as many have been erroneously led to believe. The Commission, like other businesses, comes to the end of a fiscal period with cash in the bank but also with operating liabilities. An examination of Schedule No. I shows that from the total Cash and Investments on May 31, 1958, the sum of \$128,219.17 must be reserved to meet vouchers payable as of that date. The sum of \$1,232,969.06 must be reserved for encumbrances, which represent orders for the purchase of feed, materials and supplies, equipment etc.; land purchase agreements;

equipment and real estate rentals and other contracts. The sum of \$57,259.49 must be reserved to meet encumbrances incurred by the Department of Revenue in connection with the printing and issuing of hunting licenses and tags. Lastly, but very essential, the sum of \$1,250,000.00 must be reserved for Working Capital in order to support the operations of the Commission during the period February to September inclusive, of each year, when expenditures far exceed income.

The net balance of \$2,441,394.65 for the most part exists, because the planned construction of five field divisions headquarters buildings has been delayed by unexpected problems attending site acquisitions. Also, the purchase of a state-wide two-way radio system was delayed due to engineering changes necessitated by the Federal Communications Commission frequency reallocations.

The net balance of \$2,441,394.65 plus the estimated revenue for the fiscal year June 1, 1958 to May 31, 1959 has been budgeted to carry out the planned Capital Expenditure Program and to finance the Commission's other operations during the 1958-1959 fiscal year.

The individual who prefers a quick picture of the Commission's finances, may refer to the two charts, each showing as segments of a dollar, how each dollar received and expended was related to the sources of income and functions for which it was expended. The supporting schedules for these charts are the Revenue section

of Schedule No. IV and the Summarized Functional Expenditures, Schedule No. III.

Statewide Field Operations

Almost sixty percent of the Game Fund expenditures were for land management, law enforcement and other wildlife protection activities—all field activities. Since it is believed there is a wide general interest in the field activities and the amount spent for each, the expenditures are presented in detail in Schedule No. II.

Land Purchases

During the past fiscal year the Commission spent \$202,119.99 for the purchase of additional game lands, bringing the total expenditure for game lands, since the land acquisition program was inaugurated to \$4,756,656.79, and the total acreage to 922,722.87 acres.

Control and Audit of the Fund

To insure the maintenance of complete, accurate accounts and records and the judicious expenditure of funds, the Commonwealth has many controls and safeguards in effect. Under the provisions of Article IV, Section 402 of the Commonwealth's Fiscal Code, the Auditor General is required to audit the accounts and affairs of all State Departments, Boards and Commissions at least once each year. The formal audit of the Game Commission for the fiscal year ending May 31, 1958 has just been completed and preliminary reports show the accounts to be in order.

SCHEDULE I

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF MAY 31, 1958

Cash		\$1,621,116.25
Investments—U. S. Short Term Securities		3,488,726.12
Total Cash and Investments		\$5,109,842.37
Less: Liabilities and Working Capital		
Vouchers Payable—Game Commission	\$ 128,219.17	
Encumbrances—Game Commission	1,232,969.06	
Encumbrances—Department of Revenue	57,259.49	
Reserve for Working Capital	1,250,000.00	\$2,668,447.72
Net Balance available for Expenditure during Fiscal Year 1958-59		\$2,441,394.65

SCHEDULE II

LAW ENFORCEMENT AND OTHER WILDLIFE PROTECTION ACTIVITIES

Game Law Enforcement on a Statewide Basis	\$ 692,535.45
Proportionate Share of Field Divisions' Administration Costs	91,945.72
Maintenance of Prisoners Incarcerated for violation of Game Laws	3,310.62
General Administration Expenses in connection with Law Enforcement ...	86,879.32
Activities in connection with the control of predators	61,717.64
Protecting Farm-Game Projects	20,791.50
Bounties paid for predators	120,014.00

Total Cost During the Fiscal Year for this Purpose was \$1,077,194.25

LAND MANAGEMENT

Food and Cover Projects	\$ 841,739.97
Maintenance and Development of State Game Lands, Refuges, Propagation Areas and Preserves	98,676.00
Purchase of Lands including Title and Survey Costs	202,119.99
Establishing, Maintaining and Developing Farm-Game Projects	21,550.76
Proportionate Share of Field Divisions' Administration Costs	117,597.70
Purchase of Equipment (trucks, tractors, graders, etc.)	106,360.95
Feeding of Game in the Wilds	106,162.06
General Administrative Expenses in connection with Land Management ..	120,366.30
Payments to Political Subdivisions in lieu of taxes on State Game Lands ..	90,700.24
Building Construction on State Game Lands	79,029.52

Total Cost During the Fiscal Year for this Purpose was \$1,784,303.49

Other controls imposed upon all Departments, Boards and Commissions are:

1. The mandatory requirements that all invoices, payrolls, and other operating expenses shall be audited by the Auditor General and the State Treasury Departments before payment is made.
2. The mandatory daily reporting of all financial transactions to the Governor's Bureau of Accounts and Control.
3. The control exercised by the Governor's Budget Secretary over all requests for quarterly budget allotments and all other budget matters.
4. The periodic verification of Accounts with those maintained by the Auditor General's Department, the State Treasury and the Governor's Bureau of Accounts and Controls.

All the above controls and requirements are in addition to the field and internal controls, audits and etc. performed and maintained by the Commission's Accounting Section.

Earmarked Funds

Under the provisions of the Game Law, as amended by Act 271, Session of 1949, not less than \$1.25 from each Resident Hunter's License fee shall be used for improving and maintaining natural wildlife habitat on land that is available for public hunting; the purchase, maintenance, operation, rental and storage of equipment used in this work; the purchase, distribution, planting, cultivating and harvesting of game foods; the purchase, trapping and distribution of all species of game, as well as providing protection to the property of Farm-Game Cooperators.

This program has been in operation for nine (9) years. During the nine (9) year period the Commission spent \$1,103,332.30 in excess of the minimum requirements.

Act 632, Session of 1955 provides that the sum of one dollar (\$1.00) of the one dollar and fifteen cents (\$1.15) fee collected for issuing resident and non-resident hunters' licenses and tags for antlerless deer, shall be used solely for cutting or otherwise removing overshadowing

tree growth, to produce underbrush sprouts and saplings for deer food and cover on game land.

The schedules below show the expenditure of funds in compliance with the above stated acts.

RECEIPTS AND EXPENDITURES
Act No. 271, 1949

License Year	Resident Licenses Sold	Minimum to be Expended	Expenditures	Expended Fiscal Year Ended May 31, —	Over (*) or Under (-) Minimum	Cumulative Over (*) or Under (-)
1949	810,059	\$1,012,572.75	\$1,012,465.96†	1950	\$ 107.79-	\$ 107.79-
1950	801,948	1,002,435.00	1,266,856.18	1951	264,421.18*	264,313.39*
1951	810,349	1,012,936.25	1,095,938.26	1952	83,002.10*	347,315.40*
1952	830,147	1,037,683.75	1,163,287.09	1953	125,603.34*	472,918.74*
1953	859,137	1,073,921.25	1,247,584.35	1954	173,663.19*	646,581.84*
1954	868,577	1,085,721.25	1,215,545.03	1955	129,823.78*	776,405.62*
1955	897,776	1,122,220.00	1,150,865.08	1956	28,645.80*	805,050.70*
1956	901,775	1,127,218.75	1,280,927.58	1957	153,708.83*	958,759.53*
1957	934,065‡	1,167,581.25	1,312,154.02	1958	144,572.77*	1,103,332.30*

† Expenditures from September 1, 1949 (effective date of Act) to May 31, 1950.
‡ Estimated License Sale.

RECEIPTS AND EXPENDITURES
Act No. 632, 1955

License Year	Antlerless Deer Licenses Sold	Minimum to be Expended	Expenditures	Expended Fiscal Year Ended May 31, —	Over (*) or Under (-) Minimum	Cumulative Over (*) or Under (-)
1957	334,683	\$ 334,683.00	\$ 104,218.85	1958	\$230,464.15-	\$ 230,464.15-

HUNTING LICENSES ISSUED

Year	Resi- dent	Non-Resi- dent	Archery	Total Licenses	Year	Resi- dent	Non-Resi- dent	Archery	Total Licenses
1913	No	.....	305,028	1955	.....	898,542**	32,471	948,331
1918	Record	.....	311,768	1956	.....	902,540**	35,524	964,274
1923	478	.....	499,544	1957†	.....	934,065**	40,510	1,030,134
1928	2,328	.....	438,917	† Preliminary Report, Subject to Minor Changes.				
1933	1,190	.....	529,303	* Includes free Licenses issued to members of the Armed Forces and Disabled Veterans.				
1938	4,966	.....	661,807	** Includes free Licenses issued to Disabled Veterans.				
1943	7,584	77	582,780					
1948	11,833	46	882,994					
1953	28,085	69	901,138					
1954	30,664	10,691	914,882					
	30,827	14,769						

SCHEDULE III

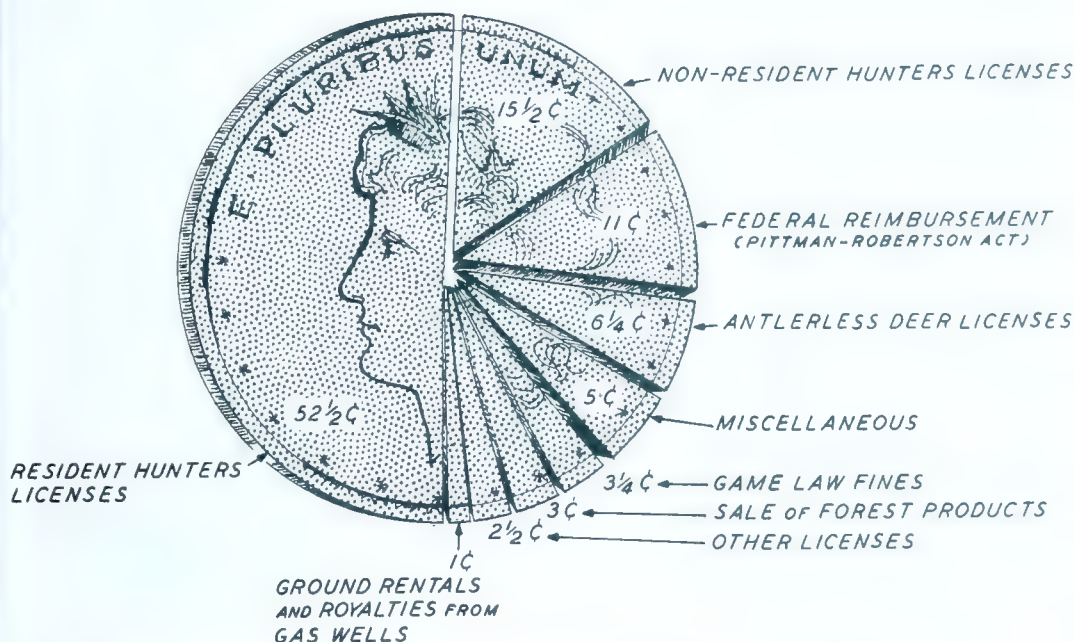
SUMMARIZED FUNCTIONAL EXPENDITURES

The expenditures of the Commission during the fiscal year ended May 31, 1958 have been subdivided into major activity groupings as follows:

		Part of Dollar
Acquisition and Management of Land for Wildlife. Management of State Game Lands, Cooperative Farm-Game Projects and other leased areas. Also payments in lieu of taxes on State Game Lands	\$1,784,303.49	38
Propagation of Game. Operation of Game Farms, purchase of game, wild game transfer, distribution of game	964,789.72	20½
Protection of Wildlife. Salaries and expenses for enforcement of game laws, assistance in enforcement of fish, dog and forest laws and numerous other field activities	951,324.98	20½
Division of Administration. Game News, other publications, exhibits, motion pictures, radio and TV programs, attending Sportsmen's meetings and other related Conservation Education Activities. Costs of Personnel and Service Sections, also includes maintenance costs of Training School which was temporarily inactivated	363,052.33	8
Bounty Payments, bear damage claims and deer proof fences	125,869.27	2½
Issuing Hunting Licenses. Includes tags, applications, reports	105,410.39	2½
Contribution to State Employee's Retirement System	107,752.00	2½
Wildlife Research. Wildlife studies to determine practical methods for developing management programs	74,859.12	1½
Accounting. Preparation and audit of payrolls, vouchers, etc. Maintenance of accounts	70,826.82	1½
Contribution to Social Security	73,500.00	1½
Executive Office. Salaries and expenses, also expenses of Commissioners	47,345.69	1
TOTALS	\$4,669,033.81	100

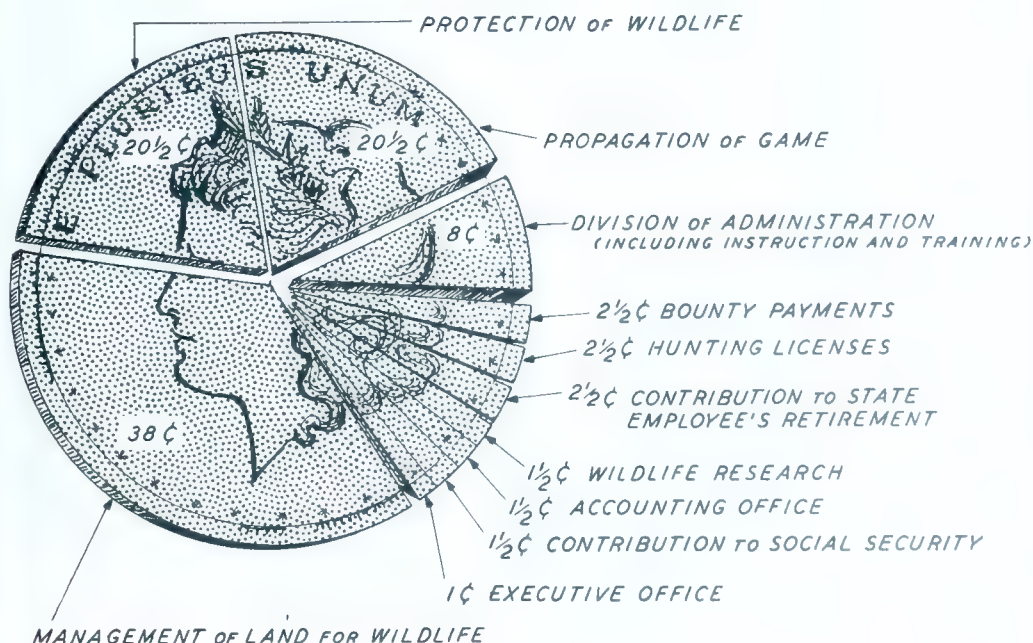
WHERE the GAME FUND DOLLAR CAME FROM

DURING THE FISCAL YEAR 1957-1958



HOW the GAME FUND DOLLAR WAS SPENT

DURING THE FISCAL YEAR 1957-1958



SCHEDULE IV

PENNSYLVANIA GAME COMMISSION

STATEMENT OF REVENUE, EXPENDITURES AND CASH BALANCES

FISCAL YEAR JUNE 1, 1957 TO MAY 31, 1958

REVENUE		
Cash in State Treasury to Credit of "Game Fund" June 1, 1957		\$4,443,238.76
Less: Unpaid Vouchers in Fiscal Offices as of May 31, 1957		- 116,992.45
Net Cash Available for Expenditure as of June 1, 1957		\$4,326,246.31
Receipts June 1, 1957 to May 31, 1958:		
Resident Hunters' Licenses	\$2,802,197.64	
Non-Resident Hunters' Licenses	796,026.64	
Antlerless Deer Licenses	334,683.00	
Archery Licenses	111,121.10	
Non-Resident Trapping	230.00	
Special 3-day Non-Resident Regulated Shooting Ground Licenses	7,714.55	
Special Game Permits	22,977.00	
Game Law Fines	167,578.96	
Interest on Deposits	19,488.37	
Sale of Skins and Guns	5,969.16	
Sale of Unserviceable Property (Through Property and Supplies)	1,143.71	
Miscellaneous	99,431.99	
Rental of State Property	24,975.91	
Sale of Wood Products	160,132.33	
Contributions from Federal Government	567,191.58	
Sale of Publications	49,301.19	
Interest on Securities	89,730.45	
Leased Lands Act 43-1955 Session	2,610.35	
Ground Rentals and Royalties (Gas Wells)	20,979.95	
Coal Royalties	40,906.82	
Total Receipts from All Sources		5,324,410.70
Total Funds Available During Year		\$9,650,657.01

CLASSIFICATION OF EXPENDITURES BY ORGANIZATIONAL UNITS

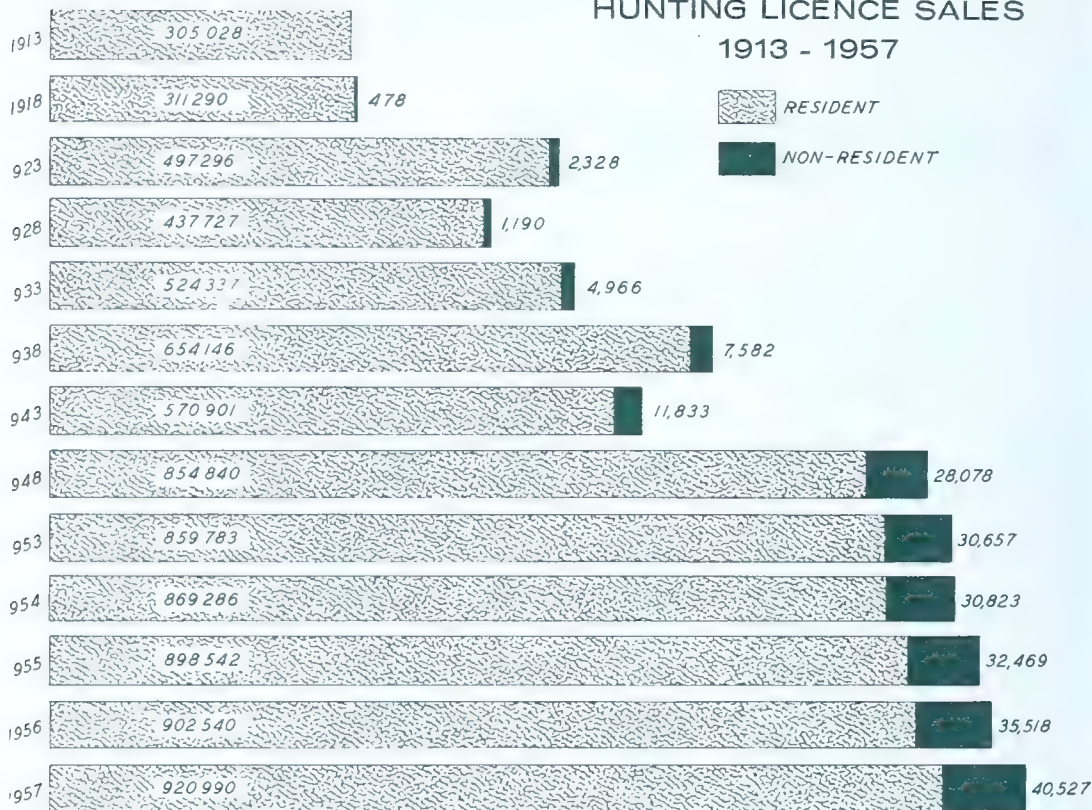
Classification of Expenditures	Exec. Office and Accounting	Conservation					Division of Law Enforcement	Division of Land Management	Total
		Division of Administration	School (Instruction and Training)	Division of Propagation	Division of Research				
Salaries	\$ 85,525.16	\$158,380.37	\$ 1,832.50	\$190,078.00	\$ 42,818.90	\$ 541,937.09	\$ 354,253.44	\$1,374,825.46	
Wages	6,933.56	8,292.31	3,755.52	190,343.78	3,753.67	102,657.86	550,895.98	866,632.68	
Printing and Stationery	1,973.38	81,497.61	56.79	106.11	96.17	20,771.49	4,366.57	108,868.12	
Food and Forage		131.28		188,150.24		763.59	65,858.69	254,903.80	
Materials and Supplies	663.62	11,326.64	875.47	298,225.15	2,442.91	25,903.29	134,113.25	473,520.33	
Fees and Professional Services		27,665.83	237.90	34.00		8,031.40	41,184.15	77,153.28	
Traveling Expenses	9,008.89	19,260.57	204.22	32,443.69	11,345.85	207,784.17	89,628.35	369,675.74	
Motor Vehicle Supplies	485.59	1,204.83	537.62	16,262.98		5,378.12	46,194.48	70,063.62	
Postage		18,657.74	2.22	633.07	62.16	2,919.59	2,474.67	24,749.45	
Telephone and Telegraph	1,415.89	1,691.70	219.62	4,814.57	648.57	10,662.62	14,585.45	34,038.42	
Newspaper Advertising						9,797.32	1,201.46	10,998.78	
Light, Heat, Power and Fuel		589.61	1,401.40	8,874.48		623.60	1,718.76	13,207.85	
Contracted Repairs		1,041.90	2,404.26	3,941.96		324.00	22,371.04	30,180.19	
Rent of Real Estate	97.03	979.29		1,717.43		2,205.17	6,873.85	11,775.74	
Rent of Equipment	9,715.30	241.56	37.50	5,706.92	1,115.95	273.39	11,264.17	28,354.99	
Insurance, Surety and Fidelity Bonds	515.23	686.39	22.27	2,154.63	162.32	2,204.03	8,858.86	14,603.73	
Other Maintenance Services	612.24	7,137.85	550.67	965.21	30.22	6,990.87	4,793.85	21,080.91	
Motor Vehicles				6,896.93			66,812.33	73,709.16	
Equipment and Machinery	838.27	7,761.53	363.86	6,224.91	382.40	2,065.07	37,845.72	55,481.76	
Land							164,289.21	164,289.21	
Buildings and Structures		3.50		266.69		32.31	64,019.07	64,321.57	
Non Structural Improvements				6,624.48				6,624.48	
Grants and Subsidies		4,000.00			12,000.00			16,000.00	
Bounties and Gratuities						125,869.27		125,869.27	
Fixed Charges									
Refunds of Receipts	418.15			324.49			90,700.24	91,024.73	
TOTAL EXPENDITURES BY GAME COMMISSION	\$118,172.51	\$350,550.51	\$ 12,501.82	\$964,789.72	\$ 74,859.12	\$1,077,194.25	\$1,784,303.49	\$4,382,371.42	

Plus: Expenditures by Other State Departments									
Department of Revenue-Printing Hunting Licenses, Tags and Miscellaneous Forms (*)								\$ 105,410.39	
Department of State-Contributions to State Employees' Retirement System (*)								107,752.00	
Department of Labor and Industry-Contributions to Social Security (*)								73,500.00	
TOTAL EXPENDITURES								\$4,669,033.81	
Cash Balance May 31, 1958 Available for Expenditure During Fiscal Year 1958-59								4,981,623.20	
Plus: Unpaid Vouchers in Fiscal Offices as of May 31, 1958 Amounting to								128,219.17	
Cash Balance in State Treasury to Credit of "Game Fund" May 31, 1958 (Includes U. S. Securities in the amount of \$3,488,726.12) ..								\$5,109,842.37	

(*) These items are paid out of the "Game Fund" upon requisitions drawn by the Department of Revenue, Department of State and the Department of Labor and Industry and are included to complete the picture of the "Game Fund" finances.

HUNTING LICENCE SALES

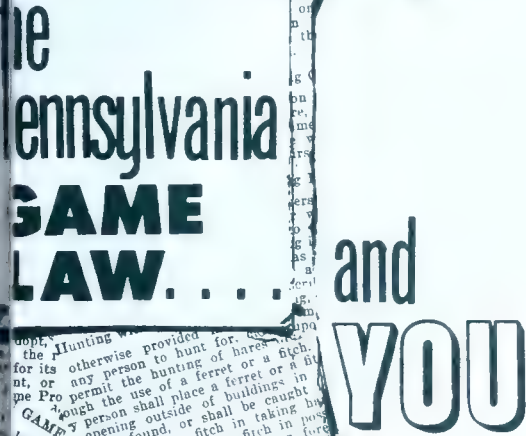
1913 - 1957



ARCHERY LICENCE SALES

1938 - 1957





The law prohibits the setting of traps closer than five feet from any occupied hole or den, except underwater sets. Muskrats and beavers may be taken only with steel or live traps and deadfalls. It is unlawful to use a snare, poison, explosives, chemicals, a steel trap with teeth on the jaws or with a jaw spread of more than six and one-half inches. The trapper may not dig out or smoke out any

Deputy Attorney General

This section of the law was interpreted judicially in *Commonwealth v. Johnson*, 40 D. & C. 617, 1941. It was held that each trap improperly set constituted a separate and distinct offense against the Act. It was also held in *Commonwealth v. Bennett*, 175 Pa. Super 244, that the six and



Leonard Lee Rue III Photo

BEAVER HOUSES and dams are specifically protected by law. The penalty for anyone destroying or disturbing or in any manner interfering with these structures is fifty dollars.

one-half inch trap spread meant "outside" spread, and a trap 6 15/16 inches was unlawful.

Traps or deadfalls are required to be marked with a metal plate or tag containing the owner's name and address. All must be taken up or sprung at the end of the season.

Baited traps are legal. Muskrat or beaver may be killed with firearms after they are caught. Farmers may dig out dens or houses of wild animals (except beaver) when found in fields under cultivation. Furbearing animals except beavers may be killed or captured in the act of destroying property or in immediate pursuit thereafter. The pursuit, however, may not continue beyond the limits of the property on which the damage is done.

Artificial lights, carried in the hand or on the person, are permitted in the taking of raccoons, opossums and skunks during the open season.

If a furbearer during closed season is accidentally killed, captured or injured while legally hunting or trapping for other animals, it must be reported to a game protector or the Commission director at Harrisburg. The animal or its pelt will then be

disposed of as the director specifies. Failure to give such notice is prima facie evidence of violation.

Special regulations surround beaver trapping, in addition to those imposed for trapping generally. It is restricted to bona fide Pennsylvania residents having a resident hunter's license. Farmers and their families may trap beavers on their own land without a license, but must have a license to trap anywhere else, even on adjacent lands.

Only ten traps are permitted. If more than the limit of beavers is trapped the excess must be reported within twenty-four hours and delivered to a Game Commission employee for disposal. Beaver skins must be presented to a salaried officer of the Commission for examination and tagging. The tag, which costs ten cents, remains with the hide until it is tanned.

The Commission may close designated beaver colonies to trapping by posting them prominently. If the colonies are on private lands, permission must be obtained.

There is a flat prohibition against interference with beaver. Section 60 of the Game Law states: "It is un-

lawful to destroy or disturb or in any manner interfere with the dams or houses of beavers except upon special permit from the Commission."

Trap robbing is also specifically made unlawful by Section 607. Traps of another may not be disturbed or the animals therein taken out. Unless traps are set on private property without permission, they may not be interfered with if set by a Commission officer or agent to trap wild animals or birds.

Specific authority is given to the Commission to use drastic methods where necessary to control furbearers. If they are "excessively destroying property or otherwise becoming a nuisance" in any area, the Commission may remove all protection, or have them removed to another place, or direct their killing and disposition.

The lowly skunk, if he invades the teeming haunts of man, is subject

to drastic action. Within boroughs and cities, or 200 yards thereof, they may be killed "at any time and in any manner. This, however, does not abrogate local ordinances against discharge of firearms or use of explosives or chemicals, where such ordinances against discharge of firearms or use of explosives or chemicals, where such ordinances exist. With final irony, the Legislature has also decreed that "the carcasses and skins of skunks so killed may be disposed of in such manner as the person killing them may see fit." It would almost seem that someone in the Legislature didn't like skunks.

A fifty dollar penalty is provided for illegal killing of beaver or otter, or interference with them or their dams or dens. For other animals the fine is twenty-five dollars. Violations of other provisions subject the offender to a ten dollar penalty.

LOWLY SKUNK is usually an unwanted guest in the haunts of man. They may be killed at any time and in any manner within boroughs and cities although firearms may not be used in violation of local ordinances.

Maslowski & Goodpaster Photo





FIELD NOTES



Good Samaritan

VENANGO COUNTY—Most all Game Protectors have many complaints and much trouble with deer damage. Recently I had a very different dealing with a farmer of the area. We had a report of a deer hit on the highway. Game Protector Borger and myself tried to locate this deer and while doing so, two Deputies also came looking for the same one, it having been reported to them. Finally we located it in the farmer's back yard. He had observed it near his place and taken it home. Stated it had probably crossed the road to eat his corn. We were going to take it along or dispose of it there as it could not walk. However it did not have any broken legs. The farmer wanted to keep it and had already applied liniment and salve to some cuts. We, agreed to leave it there. Two days later he called me to say it seemed o.k. and had left for the woods that day.—Game Protector Clyde Decker, Franklin.

DON'T THANK ME—
JUST STAY OUT OF
MY CORN FIELD!



Hula-necked Pheasant

YORK COUNTY—A farmer from Hellam Township, Bill Wallick, recently told me about an unusual pheasant tragedy. He raised some pheasants following the destruction of a nest as a result of mowing. The particular pheasant was old enough to be recognized as a cockbird when it met the fatal accident. Examination revealed the bird was attempting to swallow a horse hair when the hair became wrapped around its neck strangling the bird. Could it be pheasants are also following the "Hulu Hoop" craze?—Game Protector Daniel H. Fackler, Windsor.

Unusual Collection

MERCER COUNTY—Some sportsmen go to no ends to do some good for all concerned. And this is the idea in the mind of Rudy DeAugustine of R.D. #5, Mercer, who collects all freak and odd birds and animals that have died accidentally or are killed legally in Pennsylvania, and has them mounted at his own expense, so that anyone may see them as they were in the wild. These mounted specimens are in dust and mothproof display show cases.—Game Protector Arthur Biondi, Mercer.

Doves Never Desist

SCHUYLKILL COUNTY—I have watched a pair of mourning doves hatch 3 broods of young in a blue spruce tree near a farmer's house in Pine Grove, R.D. They started in early spring and were hatching the first week in September for the last brood.—Acting Game Protector F. Mason Spancake, Pine Grove.



Old Rocking Chair's Got 'Em

BERKS COUNTY—Deputy De-Turk, Oley, received a report of comfortable Dove hunter. Seems this gentlemen has discovered that the doves like to roost in an evergreen plantation near Oley. Each evening he had taken his post along a flyway, seated in a folding chair, waiting for the birds to appear. We have no report on his success; at least he was comfortable.—Game Protector Joseph A. Leiendecker, Reading.

Fisherman's Folly

BEDFORD COUNTY—Fish Warden McIltnay and I were checking a fisherman who was fishing beneath the bridge at the Juniata Crossing on the Juniata River and he became a little indignant over the fact that we would even suspect him. His blowoff finally subsided to the stage where he was condemning the various Commissions for not doing any stocking. The fact that he had fished there for two hours and had not had a bite was evidence. Mr. McIltnay patiently explained that his choice of a fishing spot might be poor as the water there was only about two inches deep and perfectly clear and had there been any fish there, he surely could see them. Our sportsman replied that he had noticed that fact, however, this was the only place on the river where there was any shade.—Game Protector John Troutman, Everett.

Some Days You Just Can't Win

ALLEGHENY COUNTY—While walking in the woods below headquarters I surprised a fox squirrel burying nuts in the leaves. He ran about 50 feet to a large oak and just as he got to the top of the tree, he jumped on a limb which proved to be rotten. Falling somewhat like the man on the flying trapeeze, he hit the ground with a thud. Feeling like Basillio after the Ray Robinson fight, he tried to dive in a hole. Halfway in and halfway out a great commotion ensued. The woods rang with a screeching and chattering, and down came Mr. Squirrel with another thump as a red headed woodpecker came from the hole and disappeared through the trees, scolding all the squirrels in creation.—Game Protector Samuel K. Weigel, Gibsonia.

To the Victor . . .

LANCASTER COUNTY—One day last October I saw something that I have never seen before. I saw a bunch of crows worrying two turkey buzzards. On getting closer I discovered what it was all about. There was a skunk killed on the road and apparently the crows thought that it should belong to them and not the buzzards. I had never seen crows fighting buzzards before.—Game Protector J. Eicholtz, Strasburg.





Barn Buzzards

BUCKS COUNTY—Over the years, I believe that I have received my share of odd complaints, but it appears that there will always be something new turning up. This concerns buzzards of all things. As many as 17 buzzards at a time perch on the peak of a barn roof. Rain water is collected via spouting into a cistern. This water is used for cattle only, but the owner is slightly concerned over the white washing job the buzzards have been doing on the roof. The birds also perch on the chimney and peak of the house which is about 150 feet from the barn. The house by the way is occupied.—Game Protector Edwin Flexer, Quakertown.

Welcome, Stranger

MERCER COUNTY—On the morning of September 16, a grouse flew into a window of the A.A.A. building in downtown Greenville. Deputy Davis was called and when he walked into the building, there was the grouse on a desk and the people around guessing as to what kind of bird it was, naming anything from a hawk to a monkey-faced owl. When told it was the State Bird they still didn't know until told that it was a Grouse.—Game Protector Arden Fichtner, Greenville.

Number, Please

BERKS COUNTY—Some of our dove hunters should practice wing shooting, and not shoot them on the ground or on a wire. Since the season opened one half mile section of telephone cable has been shot into four times causing much expense to the phone company and inconvenience to many subscribers.—Game Protector Harry Rickert, Reading.

How Much Is A Litter

SOUTHEAST DIVISION—Each year the Berks County Federated Sportsmen gather at the Reading Water Supply Dam to remove trash and rubbish left by the fishermen during the summer months. Several of the Game Commission personnel took part in this annual clean-up on Sunday morning September 28, 1958. After this experience there is a doubt in my mind as to who is the greatest violator when it comes to dropping litter and trash. We had three large truck loads in about three hours. What was the major portion of each load??? Beer cans and soda bottles.—Land Management Assistant, Roy Trexler, Reading.

Battle Cry

CLEARFIELD COUNTY—Recently, I observed an incident that was rather amusing. I was patrolling in Brady Township for pre-season hunting when I observed a large ringneck cock going into a pasture field. Soon after the bird entered the field he crowed and at once a calf that was in the field went to the ringneck. They took a few passes at each other, then appeared in the far side of the pasturefield and crowed again. At once the battle was renewed for a few minutes then the ringneck took to the air and went over on the hillside and crowed a number of times and the calf kept running from one side of the field to the other looking for his opponent.—Game Protector Claude Kelsey, Troutville.

Where To, Whip-poor-will?

FAYETTE COUNTY—On September 7, 1958 just about dusk, I saw what first appeared to me to be a dark cloud pass over my residence in Connellsville R.D. #1. By a second look, this cloud appeared to be a flock of migrating hawks. On the third look and listening I could hear from one of the birds, a sound, "Whip-poor-will." When they disappeared I was puzzled more than ever. Later, a little research on the whip-poor-will concluded this way, "I know not where you came from and care less where you go."—Game Protector A. J. Ziros, Connellsville.

Arrows Into The Air

LUZERNE COUNTY—While attending the Wyoming Archer Annual Meeting I had this story revealed to me. The archery season was in full swing when this married couple went deer hunting and were very fortunate to see this fine young doe staring the housewife in the face. She shot all of her arrows at the deer and yelled to her husband to bring over some arrows because she shot all of hers. Her mate rushed over with a new supply of arrows and they both used the remaining arrows and the deer still looked at them and wondered what was coming next. So, the two William Tells had to chase the deer away and then proceeded to recover their arrows and went home happy.—Game Protector Edward Gdosky, Dallas.



WHY CHEW UP
EVERY TREE IN
THE WOODS?



Bear Tree

ROSS LEFFLER SCHOOL OF CONSERVATION—During the month of July, the student class noticed where a bear had bitten into and broken a branch of a pine tree. Since, it has been noted that the bear has continued to return to the same tree and has mutilated several more branches. What brings the bear back to that particular tree is a point to ponder.—Student Officer Alfred Graver.

Rock-A-Bye Squirrel

YORK COUNTY—Rock-A-Bye squirrel in the chimney top. When the wind blew the chimney rocked. Down came squirrel, nest and all. Late in September, a gray squirrel had a nest of young in a metal, cylinder type chimney in York. During a severe storm, the chimney rocked, down came squirrel, nest and all. An interested observer gathered up the nest containing the four young and placed them in a basket. The mother squirrel, not pleased with the situation, constructed a new nest in the same chimney location and removed all the young squirrels, one by one, to the same location. For mother's sake, here's hoping for no more wind.—Game Protector Gerald D. Kirkpatrick, York.



OUTDOOR FUN WITH A FUTURE



Bird Feeding—A Two-Way Good Turn

By Ted S. Pettit

FOR several years a Boy Scout Troop in Northern Michigan has been working on a conservation project, that along with some others, has won for the Troop national acclaim as well as state and local awards. Troop 20, of Leeland, Michigan, has made and given away more than 500 bird feeders. What is especially interesting about this project is the motive behind it and the method of giving away the feeders.

The primary purpose of this project was to get more people interested in birds, and through birds arouse an interest in all of the outdoors and nature. A secondary purpose was to provide entertainment for shut-ins—either elderly people who could not get about too well in the winter or anyone who was confined to his home with illness or for other reasons. The Troop believed those backyard feeders that attracted birds would serve as entertainment for these people. Obviously, birds benefited, too, as more than 500 feeders were set out and kept stocked all winter with seeds, fruit and suet.

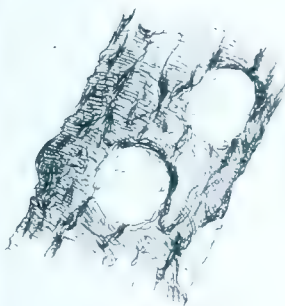
Interesting, too, about this project was the fact that the cost to the Troop was virtually nothing. When merchants around the county heard of the project, they saved wooden

packing cases and crates that could be taken apart and rebuilt into feeders. Nails and screws were salvaged from the same cases. Hardware cloth for suet holders was donated.

To make feeders in this huge quantity, a mass production scheme was necessary, and one was worked out. The first step was to design a simple, yet practical feeder that took a minimum of wood, labor and time to produce. The illustration shows Troops 20's dual purpose feeder. My family can testify to its effectiveness, since we have had one on our back porch for two years and have observed jays, chickadees, downy woodpeckers, hairy woodpeckers, titmice, juncoes, purple finches, gold finches, evening grosbeaks, mocking birds and several species of sparrows feeding on it.

One of the Scouts in Troop 20 had a basement workshop with power equipment. With a couple of friends he prefabricated the feeders—that is, after other fellows had knocked down the crates, he sawed the sides, ends and bottoms of the boxes to the desired shapes and sizes for the feeders. The knocked-down feeders were then picked up by other members of the Troop who assembled them. The assembled houses

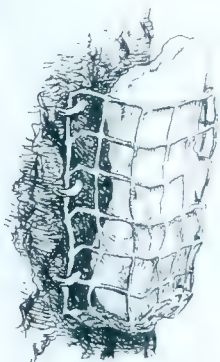
WINTER FEEDERS



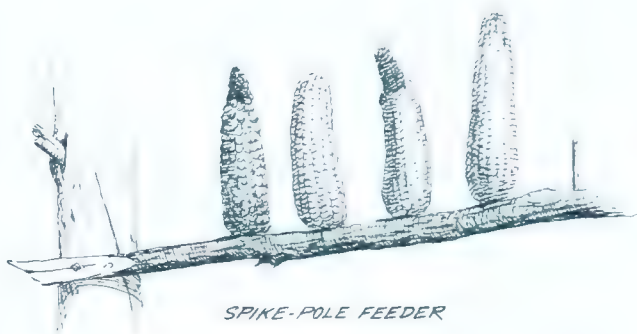
HOLES IN LOG-
PACKED WITH SUET



"WEATHER VANE"
FEEDER



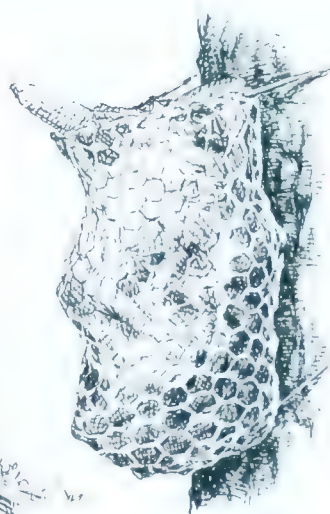
HARDWARE CLOTH
SUET HOLDER



SPIKE-POLE FEEDER



CORN SHOCK SHELTER



WIRE BASKET
FEEDER

were then taken to another member's garage where they were painted a dark green (with donated paint).

Finally, the feeders were delivered to the homes of those people who asked for them and who agreed to keep them filled with seed and suet all winter. Newspaper stories and radio announcements told of the project and publicized the fact that feeders could be had for the asking. Requests came from as far away as Massachusetts and New York.

What Troop 20 did, and is still doing, any youth group can also do. It takes organization and planning, and it takes work. But the results are extremely worthwhile both from the point of view of feeding birds in the winter and equally important from the angle of making more people nature and conservation conscious.

Other Bird Feeders

Your own ingenuity and inventiveness can easily result in your designing your own feeders for either suet or seed, or a combination job that will hold both. The following ideas may get you started.

The simplest kind of a suet holder is a wire soap dish that you can buy for 25 cents or so in any ten cent or hardware store. This is the soap dish that resembles a small wire basket,

and is about an inch deep, four inches wide and six to seven inches long. On each end are springs that are stretched around the faucets in the kitchen sink. To use it as a suet holder, do this:

Get a piece of wood about twelve inches long and five inches wide, and an inch thick. About half inch from each end of the board, and in the center of the board, screw in a small hook—the kind that is used to hang cups in the kitchen closet. (Hardware stores call them "cup hooks".) Stretch the springs of the soap dish around these hooks so that the open top of the soap dish is flat against the board. Fasten the board securely to a tree or clothes post about head height above the ground. Place suet in the dish.

Another easy-to-make suet holder is simply a piece of natural wood (the bottom 18" of an old Christmas tree or other log) or an 18" long piece of 2" x 2". Use a one inch or three quarter inch wood bit and drill three or four holes in each side of the wood about an inch deep.

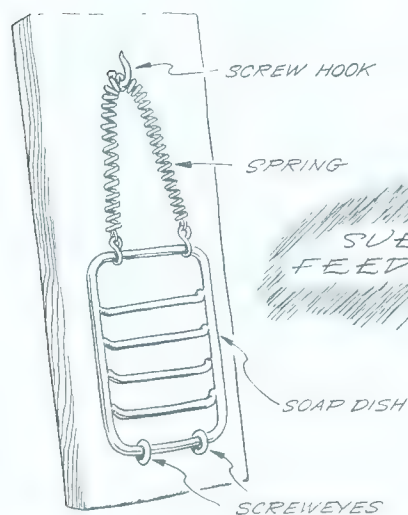
Stuff suet in these holes. Fasten a screw eye in the end, and hang the wood from a branch or on a clothes pole.

If you use a piece of 2 x 2 that is planed smooth, use a saw to make some grooves around the piece of wood so that the birds have a place to cling as they feed.

The simplest kind of a seed tray is a piece of board about two feet long, ten inches wide and an inch thick. Get some lath or similar wood two inches wide by 1/4" thick and nail it around the edge of the board so that the seed will not blow off.

Fasten this board to your outside window sill, or to a pole or tree in the yard. Sprinkle seed of various kinds on the board.

Many hardware stores, garden supply shops and florists sell bird seeds. If you watch advertisements in the garden page of the Sunday paper you will frequently find supplies



who sell bird seed. As a last resort, use "chicken feed" that can be purchased in most super markets in the suburbs or in food stores in the country areas.

In any case, here are a few general rules to follow in feeding birds:

Once you start feeding birds, keep it up all winter. Once birds become accustomed to feeding in your yard, they will rely on you for winter food.

Place your feeders near, but not in shrubs, trees or other places where birds can hide. Many birds are too wary to venture far from cover. They will not fly too far into the open to feed. Those that do, need cover to fly to in case a cat or hawk happens by and tries to catch the birds.

Try a variety of food until you find a combination that attracts the largest number of birds. You will soon find that certain foods are preferred by birds and that you can almost select the birds that you want by putting out the right kind of food.

Here's one way to find out what birds like most in the way of food:

Get a board about two feet long, ten inches wide and an inch thick. Drill some one-inch holes through the board. Get some of the small paper cups that restaurants use to serve jelly for toast. Place the cups in the holes and nail the board to the window sill or to a tree or post.

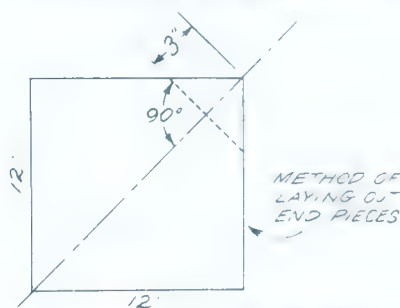
Put a different kind of food in each cup. Check the board every few hours to see which food birds eat first, which cup is emptied next, etc. In that way, you can tell which food birds prefer and which kinds to put out to attract certain birds.

Trolley Feeder

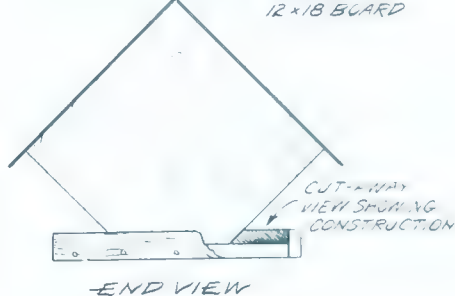
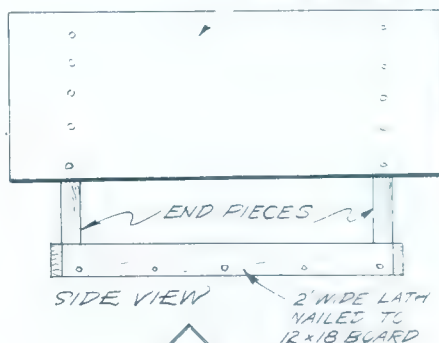
You may find that at first, birds are too wary to feed on your window sill, and that they seem to prefer the feeders that are away from the house. Here's a way to attract them closer to the house:

Build a feeder as is shown in the illustration that will hang on a wire or clothes line. Stretch a piece of

FEEDER WITH ROOF



METAL ROOF

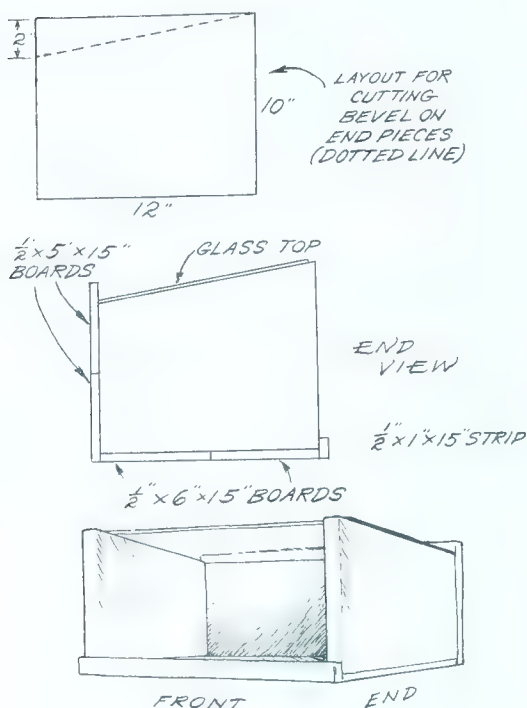


wire or clothes line from a tree or post to the house window. Start with the feeder at the post or tree, some fifty feet from the house. Fill the feeder with the kind of food that birds seem to prefer.

When birds use the trolley feeder regularly and show no fear of it, move it a few feet closer to the house. Wait a few days until birds are accustomed to it again, then move it a few feet closer again.

Keep up this process every few days until the birds are feeding near the house. Then put food only on the window sill, or continue to feed them in the trolley feeder, if the

WINDOW'SILL FEEDER



feeder is where you can watch it easily.

Permanent Feeders

The feeders described earlier are excellent for getting started, and to discover whether or not birds will feed in your yard, and whether or not you are interested enough to keep up bird feeding as a hobby.

If you find that birds come regularly to your yard and that you want to stay at it for several years, it's time to make some permanent feeders—the kind that will last for a long time.

The kinds shown in the illustration are good for this purpose. The weathervane feeder is an excellent one for example. It turns with the wind so that birds are protected from the wind as they feed. More than that, strong wind will not blow the feed away.

The feeders with the glass top and back are fine for the window sill or a pole near the house. The food and

birds are protected from wind or snow, and you can look through the glass and see what is going on inside. These are easy to make but require a little more care and skill. They are attractive to look at, too, and if you want to try bird photography, they are better for pictures.

Squirrels and Cats

Many bird watchers who start back yard feeding soon find two problems—squirrels and cats. Squirrels will find the feeders and eat up all the food very quickly. They also will scare away birds. Cats sometimes will visit feeders and lie in wait for birds, trying to catch them as they come looking for food. Cats may even climb poles or trees and scare birds away.

The answer in part is to put smooth metal around the pole or tree so that the cat or squirrel cannot climb up. Use old tin cans or a piece of sheet metal and tack it around the tree or pole in a band about fifteen or twenty inches high. Do it so that the animals cannot get a grip with their claws and climb over it. Place the band high enough so that the animals cannot jump over the metal and get a grip on the wood above it.

Another stunt is to place feeders on top of poles made from old pieces of pipe.

Squirrels frequently can jump over feeders that hang from trees or from a tree to the pole on which the feeder is located. To make this impossible, get a piece of sheet metal and cut it in the shape of a band—two feet in diameter. Cut a slot from one edge to the center of the circle. Then bend the metal until it forms a flat cone and fasten it with rivets or screws and nuts. Run the wire that holds the feeder through the center of the cone so the cone forms a roof over the feeder. It will help to keep squirrels away.



CONSERVATION NEWS



Governor Appoints New Member to Game Commission



Carroll F. Hockersmith

Bounty Claims Receive Careful Consideration

Every claim for bounty involving the killing of a fox or great-horned owl, received in the Harrisburg office of the Game Commission, is carefully scrutinized with a view toward preventing fraud. Questionable claims are referred to the proper field officers for investigation.

In some cases the inquiring Game Protector learns that the claim was legitimate, that "appearances were deceitful." These are paid. In others, attempted fraud having been proven, persons guilty of trying to collect bounty unlawfully must pay the fine prescribed by law, following which the pelts are confiscated to the Commonwealth.

On November 5 Governor Leader appointed Carroll F. Hockersmith, Shippensburg as a member of the Pennsylvania Game Commission, replacing John C. Herman, Dauphin.

The newly appointed Commissioner has always been an ardent hunter. He helped to organize the Shippensburg Fish and Game Association, and was President and Trustee of the club for a number of years. In 1934 he organized the Harrisburg Kennel Club, of which he was Vice-President for several years.

Hockersmith has been a licensed judge of the American Kennel Club of New York between fifteen and twenty years. For ten years he has been one of the top breeders of springer spaniels in the United States. He has won prizes with his dogs at some of the largest shows in the country, and has run his springers at some of the largest trials for the breed.

The Commissioner, now 63, graduated from Shippensburg High School in 1912, following which he joined his father in the grocery store, where he worked until 1943. He became Postmaster in Shippensburg on July 1, 1943, and held the post until October 31, 1956, when he took optional retirement.

Commissioner Hockersmith belongs to the Masonic Lodge, the American Legion and the Veterans of Foreign Wars—all in Shippensburg. He is a veteran of World War I and possesses the Purple Heart decoration for wounds received in the Battle of Argonne Forest.

Commission Honors Game Farm Head

Isaac Baumgardner, Superintendent of the Game Commission's Western Game Farm at Cambridge Springs, Crawford County, was honored by the wildlife agency at its meeting in Meadville last week.

C. Elwood Huffman, Commission President, presented a plaque to Baumgardner for his outstanding contribution toward the successful hatching of wild mallard duck eggs at the State Wild Waterfowl Farm near Meadville, Crawford County.

The story behind the award is this: Until late in the 1957 hatching period at the Waterfowl Farm only a fair percentage of the mallard eggs hatched. After study of the problem, and drawing on 28 years of experience as a game bird propagator

at three of the State Game Farms, Baumgardner recommended washing the final setting of last year's duck eggs with a bleaching agent. The treatment, which destroys the bacteria that previously killed the embryos, proved so effective it was adopted as standard procedure this year, increasing the duck hatches exceedingly.

This recalls that at first there were problems to be solved before the present-day efficiency in incubating and raising ringneck pheasants was acquired. Wildlife agencies in this country tested and researched for years before becoming very successful in hatching and rearing this bird whose original home was in the Far East. Superintendent Baumgardner's discovery of the answer to greater mallard duck hatching success is therefore a parallel.

HUNTERS—REPORT YOUR BIG GAME KILL

The Game Commission, as well as other wildlife agencies, both federal and state, have often stressed how important it is to their management programs that certain game kill information be turned in by hunters.

The voluntary reporting of leg bands and ear tags carried by small game under study is a valuable contribution by sportsmen anywhere. In Pennsylvania, however, the Game Law requires that the portion of the hunting license provided for reporting big game killed in a wild state shall be properly completed and mailed to the Game Commission at Harrisburg within five days following the close of the season for the deer or bear bagged. The law further stipulates that in case a deer or bear has been killed in season by a person not required to secure a license, or by a person who previously killed either species of big game animal, or by a person who lost the tag accompanying his license, such person shall mail to the Commission at Harrisburg a statement setting forth the same information required on the big game report card attached to the hunting license, within the specified time.

Despite repeated explanation as to how important these reports are to game managers in planning the best possible game hunting in Pennsylvania for the future, the interest in making the required big game report, particularly that on deer, has declined in recent years.

The Pennsylvania Game Commission is therefore seriously considering legal action to correct this situation. The Game Law wisely requires the report, and hunters should realize the necessity of cooperating as an aid toward ensuring the continuance of good deer and bear hunting in the state.

HUNT SAFELY—RETURN HAPPY

Human failure is the cause of most hunter-gun casualties. Records show that persons shot by hunters' firearms are usually the victims of carelessness, excitement, greed, desire to prove shooting prowess, or ignorance of the gun's operations. Among students of hunter casualty causes it is an accepted fact that many a person undergoes an amazing change, becomes a different individual, as soon as he embarks on a big game hunt. This Jekyll-Hyde switch is recognized as the cause behind many hunting accidents, and is the reason for stressing emotional control while hunting.

The mature as well as the young suffer from optical illusions. Waiting until identification of a deer is positive, and overcoming the impulse to shoot at the instant something is sighted, are self control factors important to accident prevention. Also, while afield it is wise to dress in a manner to avoid being mistaken for a deer by an anxious or poor-sighted gunner. Bright garments which contrast with the seasonal background,

and which look completely unlike any wild bird or animal, are recommended. Many hunters who wear bright red or yellow clothing bag their deer, which is proof that conspicuous garments do not hurt the hunter's shooting opportunities.

According to a study made by the Vision Conservation Institute, from 6 to 8 percent of all men are color-blind. The Institute warns persons who are not color-conscious or whose eyesight is not keen: "Know the limitations of your vision. Hunt within visual bounds and wear glasses when they are prescribed. Good vision can be the difference between hunting success and failure—safety and danger."

Deer hunters are advised to keep mentally alert, to put a brake on their emotions when afield and to take a second look—to be sure. Excitement and imagination can combine undesirably in big game hunting. After all, a missed opportunity for a shot at a buck isn't nearly so important as the other fellow's safety and one's own peace of mind.

HUNTER SAFETY TRAINING was conducted in Mercer County High Schools just prior to the 1958 season. Shown here are three of the instructors giving rifle tips to two Penn Junior High School students. Left, to right: Frank Tresize, SAAMI field representative; Melvin Berry, local recreation program director; students Richard Peters and Al Campbell, and District Game Protector Arden Fichtner.



Officers Combine Forces, Catch Illegal Deer Killers

Now that the wraps are off, an interesting chapter in wildlife law enforcement can be revealed. Last month Game Protectors and other officers in southcentral Pennsylvania combined forces and closed in on a band of out-of-season deer killers. The Game Commission's field men have kept the suspects under surveillance for approximately two years. Conclusive information gathered within the last few months determined it was time to strike.

James A. Brown, Supervisor of the Commission's Southcentral Division, coordinated the operation with the aid of his Law Enforcement Assistant, Lester E. Sheaffer. On November 3, Brown reported, "To date twelve persons who operated in this three-county deer killing ring have been rounded up. They have paid fines totaling \$2,000. In addition, one man is confined to the Mifflin County jail for a period of 409 days. When arraigned before justices of the peace in Snyder and Juniata Counties most of the 12 men pleaded guilty either to possessing or killing deer in close season. Several others admitted their guilt and made direct settlement."

Game Commission's Northcentral Field Division Moves Headquarters

The Game Commission's Northcentral Field Division Headquarters recently moved from 214½ E. Water Street, Lock Haven to R. D. No. 1, Avis. The new telephone number is: PLaza 3-3404.

Said the Supervisor, "The prosecuting Game Protectors were: George Smith, Juniata County; C. F. Walker, Snyder County; and Harold Russell, Perry County. Other Game Protectors and Deputy Protectors co-operated in the simultaneous raid last month. Investigations now in progress will likely result in the apprehension of others who killed deer illegally."

Brown added, "A great deal of credit for helping to investigate the violations and bring the involved individuals to justice is due the following persons, whose cooperation cannot be too highly praised: Juniata County's Sheriff, Marlin Notestine and Deputy Sheriff William Fowler, State Policeman Quentin Cooper, Benjamin Jones and Daniel Taptich—all from the Lewistown barracks and Fish Warden C. V. Long.

PENNSYLVANIA SUNRISE-SUNSET TABLE

The following times of sunrise and sunset are based on the 77th Meridian which runs north and south through Eastern Adams County, Harrisburg Airport, Williamsport and Eastern Tioga County. Times shown are EASTERN STANDARD TIME.

Hunters in localities east or west of the 77th Meridian should note that there is a considerable variation in sunrise-sunset times from those shown before (as much as 8 minutes earlier in Philadelphia and 12 minutes later in Pittsburgh). Check your local weather station for correct information.

Date	Sunrise	Sunset	Date	Sunrise	Sunset
December	a.m.	p.m.	December	a.m.	p.m.
1	7:10	4:42	7 Sunday—No Hunting		
2	7:11	4:41	8	7:17	4:41
3	7:12	4:41	9	7:18	4:41
4	7:13	4:41	10	7:19	4:41
5	7:14	4:41	11	7:20	4:41
6	7:15	4:41	12	7:20	4:41
			13	7:21	4:41

Pennsylvania Official 1958 Open Seasons and Bag Limits

(Regulations apply for Hunting License Year, September 1, 1958 to August 31, 1959)

Open season includes first and last dates listed, Sundays excepted, for game. The opening hour for small game, migratory game birds and other wild birds or animals on October 25 will be 8:00 A. M., EST. On other opening days, and otherwise during the season for upland and big game, the shooting hours daily are from 7:00 A. M. to 5:00 P. M., EST, excepting from July 1 to September 30 inclusive, 6:00 A. M. to 7:30 P. M., EST, and the hours for the October archers' deer season, which are 6:00 A. M. to 5:30 P. M., EST.

UPLAND GAME (Small game possession limits below)	BAG LIMITS		OPEN SEASONS	
	Day	Season	First Day	Last Day
Ruffed Grouse	2	8	Oct. 25	Nov. 29
Wild Turkeys	1	1	Oct. 25	Nov. 22
Squirrels, Gray, Black & Fox (combined)	6	30	Oct. 25	Nov. 29
Ring-necked Pheasants, males only	2	8	Oct. 25	Nov. 29
Rabbits, Cottontail	4	20	Oct. 25	Nov. 29 and
Rabbits, Cottontail ..(not more than 20 in combined seasons)			Dec. 27	Jan. 3, 1959
Bobwhite Quail	4	12	Oct. 25	Nov. 29
Hares (Snowshoe Rabbits)	2	6	Dec. 27	Jan. 3, 1959
Raccoons (hunting or trapping)	Unlimited		Sept. 1	Aug. 31, 1959
Woodchucks (Groundhogs)	Unlimited		Sept. 1	Aug. 31, 1959
Grackles	Unlimited		Sept. 1	Aug. 31, 1959
Squirrels, Red (closed October 1 to 24, incl.)	Unlimited		All mos. (exc. Oct. 1-24)	
Bears, over one year old, by individual	1	1	Nov. 24	Nov. 29
Bears, as above, by hunting party of three or more	2	2	Nov. 24	Nov. 29

DEER.		Bow and Arrow Season—Either sex, regardless of size. (Requires Hunting License and Archery License, but no Antlerless Deer License)		(only one deer for combined seasons)	
		ANTLERED DEER—Regular Season—Male with two or more points to one antler: Provided, a male deer with an antler three or more inches long without points, measuring from the top of the skull as the deer is in life, shall be considered legal, by individual		1	1
		ANTLERLESS DEER SEASON—(Requires Hunting License and Antlerless Deer License), by individual			
					Oct. 4 Oct. 24
					Dec. 1 Dec. 13
					Dec. 15, 16 and 17

NO OPEN SEASON—Hungarian Partridges, Hen Pheasants, Sharp-tailed Grouse, Cub Bears, Elk, Otters.

FURBEARERS:	
Skunks and Opossums	Unlimited
Minks	Unlimited
Muskrats (traps only)	Unlimited
Beavers (traps only) state-wide	5
	Sept. 1 Aug. 31, 1959
	Nov. 22 Jan. 17, 1959
	Nov. 22 Jan. 17, 1959
	Feb. 14 Mar. 21, 1959

SPECIAL REGULATIONS

POSSESSION AND TRANSPORTATION LIMITS of legally-killed small game shall mean not more than the daily limit for the first day nor more than an accumulated total for each succeeding day of the open season for each species; but not in excess of the season limit, regardless of where held, stored or found in possession.

DEER—Even though there are three separate seasons for taking deer, a hunter may not kill more than one deer during the three combined 1958 seasons, whether hunting individually or with a camp or hunting party. An Archery License is required during Bow and Arrow Season, issued only by County Treasurers at a fee of \$2.15, and the Department of Revenue, Harrisburg, at a fee of \$2.00. Antlerless Deer Licenses are issued only by County Treasurers at a fee of \$1.15, and valid only in the county for which issued. Farm occupants may hunt for deer during the Archery Season and the Special Antlerless Deer Season without a license on lands resided upon, or those immediately adjacent with the written consent of the owner or lessee. Under the law, no application for an Antlerless Deer License shall be approved, or license issued, to a nonresident prior to November 15, or after December 14, 1958.

BEAVERS—No trapping at Commission-posted dams. Nonresidents may not trap beavers. One person may set, tend or operate 10 traps only. Traps must not be set on the structure of any beaver dam or house, or within 25 feet of the waterline on the structure of either thereof. Tags must be kept above ice or waterline to facilitate identification without disturbing traps. Pelts must be tagged within 10 days after season, and may not be sold or otherwise disposed of until properly tagged. Present them to the Game Protector in District or County where trapped.

TRAPPING—Traps for furbearers not to be placed, staked or set before 7:00 A. M. on the first day of open seasons. The season indicated for Trapping closes at 12:00 o'clock Noon on last day. Traps must be tagged with metal name tags

SNARES—The use of snares is prohibited in all counties except by special permit

1958 PENNSYLVANIA OPEN SEASONS FOR WATERFOWL AND OTHER MIGRATORY GAME BIRDS UNDER FEDERAL AND STATE REGULATIONS

SPECIES	OPEN SEASONS FIRST DAY	OPEN SEASONS LAST DAY	DAILY BAG LIMITS	MAXIMUM POSSESSION LIMITS	LEGAL SHOOTING DAYS AND HOURS (SUNDAYS EXCEPTED) <i>Unlawful to hunt for any wild bird or animal, including migratory game, on October 25, 1958 prior to 8:00 A.M., E.S.T.</i>
Sora	Sept. 1	Nov. 8	25	25	Sept. 1 to Nov. 8 1/2 hr. before sunrise to sunset
Rails (except Sora); Gallinules	Sept. 1	Nov. 8	15	30	Sept. 1 to Nov. 8 1/2 hr. before sunrise to sunset
Woodcock	Oct. 15	Nov. 22	4	8	Oct. 15 to Nov. 22 1/2 hr. before sunrise to sunset
Wilson's or Jacksnipe	Oct. 15	Nov. 13	8	8	Oct. 15 to Nov. 13 1/2 hr. before sunrise to sunset
Doves	Sept. 1	Nov. 4	10	20	Sept. 1 to Nov. 4 12:00 o'clock Noon to sunset

NO FEDERAL STAMP REQUIRED TO HUNT SORA, RAILS, GALLINULES, WOODCOCK, JACKSNIPES AND DOVES; STAMP REQUIRED TO HUNT DUCKS, GEESE, COOTS, AND BRANT.

Ducks	Oct. 15	Dec. 13	4	8	Oct. 15 to Dec. 13 1/2 hr. before sunrise to sunset
(Daily bag limit may include 1 wood duck; possession limit 2.) (Daily bag and possession limits may include 1 hooded merganser.)					Oct. 25 only 8:00 A.M. to sunset

(Daily bag limit may not include more than 2 canvasbacks or 2 redheads, or 1 canvasback and 1 redhead; possession limit may not include more than 4 canvasbacks, or 4 redheads; or 4 in the aggregate of both canvasbacks and redheads.)

Mergansers (American

and Red-breasted) Oct. 15 Dec. 13 5 10 (not to be counted in daily bag and possession limits on other ducks)

Geese (except

Snow)

Oct. 15 Dec. 13 2** 4**

Oct. 15 Dec. 13 10 10

Oct. 15 Dec. 13 6 6

MIGRATORY BIRD HUNTING METHODS

Permitted: Bow and arrow, or shotgun not larger than 10-gauge, fired from shoulder (including hand-operated and semi-automatic repeating shotgun of not more than 3-shell capacity, which must be plugged to 3 shots so that plug cannot be removed without disassembling the gun); dog; blind; boat propelled by hand; floating device other than sinkbox; artificial waterfowl decoys. Injured or dead waterfowl may be picked up by means of a motorboat, sailboat or other craft. Shooting is permitted from a boat or other craft having a motor attached if such craft is fastened within or tied immediately alongside of any type of stationary hunting blind.

Prohibited: Use of electrical devices or recordings in taking migratory game birds; all rifles; live bird decoys; automobile; aircraft; sinkbox (battery); power boat, sailboat, or any device towed by power boat or sailboat. Waterfowl, coot, gallinules and doves may not be taken under any circumstances by the aid of salt, or shelled or shucked or unshucked corn, wheat, or other grains, or other feed or means of feeding similarly used to lure, attract, or entice such birds to, on, or over the area where hunters are attempting to take them. As used herein the terms "salt" or "shelled or

NOTE:
The season for waterfowl in the Counties of Bucks, Philadelphia and Delaware, and on the Delaware River bordering such counties, shall be November 10, 1958 to January 8, 1959.

The season for Wilson's or Jacksnipe in the Counties of Bucks, Philadelphia and Delaware shall be November 10, 1958 to December 9, 1958.

blocks, properly shocked grain, standing crops (including aquatics), flooded standing crops, flooded harvested crop lands, or, in connection with the hunting of waterfowl, coots and gallinules, grains found scattered solely as a result of normal agricultural practices, or, in connection with the hunting of doves, grains found scattered solely as a result of normal agricultural harvesting. Waterfowl may not be hunted by means, aid or use of cattle, horses or mules and no motor-driven land, water or air conveyance or sailboat may be used to concentrate, drive, rally or stir up waterfowl or coots.

FEDERAL STAMP FOR MIGRATORY BIRD HUNTING

It is unlawful for a person over the age of 16 years to take migratory waterfowl unless he carries on his person an unexpired Federal Migratory Bird-hunting Stamp, validated by his signature written in ink across its face. Not valid after June 30 following date of issue. This stamp is not required to hunt Sora, Rails, Gallinules, Woodcock, Wilson's or Jacksnipe and Doves.

** Not more than 2 geese of any kind (except Snow Geese) in a straight



The Sport of Kings

By Jim Varner

RATHER reluctantly we look back on the eleven months that are now only memories. Man has written his record and perhaps at this point an inventory of himself is in order. Maybe a pause to think of new friends as well as old friends will do the heart good. I most sincerely want to take this opportunity to wish ever reader the utmost in sporting thrills and safety, especially during this month. December ushers in the greatest outdoor saga of them all—the sport of kings.

Deer hunting is as old as man himself and down through the ages it has developed many traditions. Sir Walter Scott wrote a thrilling masterpiece of poetry depicting a deer hunt by nobility in the Scottish Highlands around the beginning of the 17th century. Sometime take time to read his "The Lady Of The Lake."

Searching records of the famous Black Forrest in the spectacular Bavarian Alps, we find that only the nobility had a right to engage in hunting—a condition that existed down through the ages until recent world wars established a more or less democratic way of allowing the average individual freedom in a game that was formerly restricted. You do find, however, a lot of pomp and ritual still in effect when hunting these former German preserves. The "hirsch" or red deer and the great stag called the "damhirsch" are held in high esteem not only as sport but as trophies by the "jagers" or guides. When one is skillfully shot by the hunter, a small branch or coniferous sprig is placed in the deer's mouth and the hunter's branch or "schutzenbruch" is presented to the successful nimrod by his "jager" on the latter's knife-blade or hat after having been lightly dipped in the trophy's blood. This branch is always worn on the right side of the hunter's hat.

Some might consider this a "lot of foolishness." But maybe it's not so foolish after all. Perhaps we Ameri-



cans as a group fail to grasp the full portent of the gifts we are receiving. Maybe we are so filled up with all the better things in life, we take everything for granted and nothing thrills us anymore.

But let's not get in that frame of mind. We have a big game animal that is just as cunning, versatile, elusive and noble as Scotland's great stag of Germany's "damhirsch." We call this deer the whitetail but let me emphasize the fact that you don't have to be a king to indulge in the chase. Whether we are a farm land, a boy in college or an oldtimer like myself, we all can take that "ole thutty-thutty" out of the rack and enjoy the sport of kings amidst hills, lakes and valleys as scenic as the Scottish heather or Bavarian Alps.

If we could get together around the campfire with old hunters, Game Protectors and woodsmen, I'm sure their experiences and observations would bring to light so many proofs of the versatility, cunning and tenacity of life displayed by the Virginia white-tailed deer that you all would agree with me that here is a game animal to be appreciated, respected and protected.

When the odds are anywhere near even with our older bucks who have survived more than two years of dangerous living, the hunter generally loses. Even the older does become very cunning and will resort to all sorts of tricks to escape. Many of you expert stalkers have followed a big track on a fresh snow that quit falling during the afterpart of the night. You almost feel the maker of the track is an old experienced stag who keeps looking back like the "flu-flu" bird to see where he has been, only in this case the deer wants to see who might be following him. You sneak a few steps at a time and watch both sides and ahead. Then the track begins to make that big circle and you later see where he bedded down in the middle of the circle. He depends on winding anyone following

him somewhere along that 360 degree arc. You may even get a fleeting glimpse of a big gray phantom as he disappears in the hemlocks, after slipping out back of you. Now and then you win by nosing the wind a few steps at a time and faithfully observing the direction of the thermal currents. With so many hunters in the woods today, however, it is difficult for an experienced stalker to get a break. Even so, there are opportunities for stalking, especially late in the season—and there is no greater challenge in all sportsdom.

Let's talk, now, about the firearm we need to effectively, and humanely, hunt this wonderful big game animal. I'm not going to stick my neck out by trying to tell you which firearm or cartridge to use. Success in hunting is generally up to the man behind the gun. If he is pursuing his sport intelligently and thoroughly with plenty of pre-season preparation the chances are he will reap of the harvest. If he is one who devotes little time or thought to the sport and dashes out unprepared, I doubt that the thrill of the hunt actually registers even if "old Lady Luck" smiles upon him.

A survey of which is the best rifle and caliber for hunting deer in Pennsylvania would bring to light a mixture of opinion that would completely baffle even the most analytical expert. In due time the expert would probably be muttering incoherently to himself should he attempt to voice any opinion that would meet the approval of the masses. And masses we have when it comes to deer hunters within our state. A reasonable guess would be some 500,000—a formidable array of nimrods. As to firearms, I'll just say rather meekly that my opinion is only one man's idea; others may be completely different but just as good.

We all have our likes and dislikes. If we didn't, there wouldn't be so many different brands of tobacco or so many models of automobiles; suc-

a variety of television sets, or so many calibers, weights and designs of firearms for us to choose from. That's what makes America such an envied nation. So choose your deer rifles, gentlemen, sort of like those "hill-billy" characters down in the Missouri Ozarks used to choose their "see-gars" and wives when I was young. If the wrapper looked good, to heck with the rest. Seriously speaking, fellows, you buyers of modern rifles are not gambling. Whether it's a Winchester, Remington, Savage, Marlin or one of our custom made sporting firearms, you will get about what you pay for. They will all do the job and last a lifetime with proper care.

This excellent variety of rifles are made in calibers to suit the most fastidious gun-crank. He has a choice for deer hunting from the new 6 M/M's. (243 Winchester and 244 Remington) to the tried and true 30/06. Some even use "super-dupers" made by Roy Weatherby in 25 to 375 caliber, while a few tote the 300 H&H, and 375 H&H Winchester

magnums. One can even include the 222 Remington, 219 Zipper and the 220 Swift as deer rifles when handled by a methodical expert. What they lack in bore diameter they make up in speed with the 220 Winchester Swift of course being the hottest of them all. While I would not recommend these highly specialized vermin cartridges to the average deer hunter, I certainly feel the fellows who use them are capable of doing a humane job as they are more or less specialists on accuracy. Practically all of them use the best of telescopic equipment.

Ruling out further comment on the 22 center fires we will discuss the calibers from the 243's and 244's up to and including the 20/06 class. This takes in a lot of calibers. Next after the 6 M/M's are the 25 or 250 class. Here we have the old 25/35 Winchester and 25 Remington which are rapidly becoming obsolete. Both have killed a lot of deer and are still used. Some states have prohibited these cartridges on big game due to the fact they develop less than

GETTING READY for the drive, these and thousands of other hunters can be seen anytime in early December, anywhere in Pennsylvania.





TROPHY DEER killed in the early 1930's looked like these which ranged from 142 pounds to 191 pounds hog dressed and dried out. The buck on the right is the largest the author has even seen in Pennsylvania. He personally weighed this 191 pound giant. About half the rifles in the photo were 30/06's.

1000 foot pounds of energy at 100 yards range. Other 25 caliber cartridges that qualify for deer shooting are the excellent 250-3000 Savage and the 257 Remington Roberts. Both of these properly loaded are highly accurate long range deer rifles as well as excellent vermin cartridges. The 6:5 or 256 Jap belongs in here and is used by some. Its ballistics as loaded by Norma of Sweden is not far behind the 250/3000.

The next cartridge on our list is one of the all-time greats, the 270 Winchester, which is one of the world's best long range, flat shooting mountain cartridges with gilt-edge, near-bench-rest accuracy. Its muzzle velocity of 3160 feet per second with a 130 grain bullet develops a trajectory so flat it will hardly miss a woodchuck out to 300 yards. I owned one of the first model 54 Winchesters in this caliber when it was first brought out in 1925. It has been one of my favorite calibers ever since. If you don't drop your deer instantly with this cartridge when using the proper bullet, I suggest you go around be-

hind him and see what's holding him up.

After the 270's come the 7 MM Mauser or 7x57 as it is known in Europe. The cartridge is a very old one but refuses to die, as it is an excellent one and will remain popular with sportsmen for many years to come. It is capable of handling any big game on this continent, and could be called a good deer cartridge. Bullet diameter is .284, or we could say 28 caliber. The new Remington 280 caliber would qualify in this caliber. While I have not tested the new 280 Remington I am sure it's right up to their standard of perfection and would make one an excellent big game rifle.

Now we come to a large group of cartridges all the same caliber as far as bullet diameter is concerned—all 308 caliber. They run about like this: 30/30 Winchester; 30 Remington rimless, about obsolete; 30 Savage; 308 Winchester, actually our NATO cartridge; 30/40 Krag; 30/06 Springfield, our present military cartridge being replaced by the

new NATO 308; 303 Savage and the 303 British which actually run slightly over 308.

The 30/30 Winchester is without doubt the most famous cartridge in the world today. It was our first high powered smokeless cartridge and was adapted to the model 1894 Winchester rifle. The record of this rifle and cartridge is nowhere near approached by any other arm. Other cartridges and rifles come and go but this combination is rapidly approaching its 65th year of popularity with nearly 3,000,000 model 94's being sold. That's a record to think about. Savage, Marlin and others make rifles in this caliber.

All of these 30's are good deer rifles. The 308 Winchester attains near 30/06 ballistics with a smaller

SOME DEER still do get big. Here is one killed in Wayne County a few years ago that weighed 186 pounds after being hog-dressed and hanging a few days. The rifle is a 30/06 sporting Springfield.



case due to the new ball powder developed by Western being used. The good old 30/40 Krag refuses to die. Too bad we don't have a modern rifle made that uses this excellent cartridge. As to the 30/06 I can only say I started my shooting career with this cartridge back in 1910. I have used them all including the numerous "wildcats." To date I have failed to find one that equals its versatility. For the man who likes to shoot a lot and reasonably it fills the bill. It can be used with the 93 grain Luger pistol bullet on squirrels to the 250 grain Barnes steel jacket bullet on elephants. Check Camp Perry records for the last many years if you doubt what I am saying. Look over the 1,000 yards scores while at it. It comes the nearest of being the mythical best all around rifle of them all.

Other excellent calibers for deer are the 8 M/M Mauser or similar group; the old standby Remington 35; the powerful Winchester 348, and its new successor the Winchester 358; the unnecessary powerful 375 H. & H. Magnum, along with some of the oldtimers, 38/55, 38/40, 44/40 and 45/70 to name a few of them. The four in this last group depend on large diameter to make up for speed. All of them will kill cleanly if the shooter will give them a chance and strive to be humane. There's nothing worse than the many hours of suffering of a grand big game animal caused by carelessness and inexperience. When you shoot, follow through and try and trace the path of the bullet. Usually it leaves telltale evidence of where it sped thru the brush or dug into the earth. A drop of blood or tuft of hair often means a clue that saves a trophy.

High speed small calibered bullets don't always leave a well marked blood trail as the entrance hole is small, causing coagulation to seal the wound. These high speed missiles blow up quickly and usually stay within the body. They develop their



OUTDOORSMAN OF THE YEAR selected through a poll of the nation's outdoor writer is General Curtis E. LeMay, shown here being presented a scroll and the 16th million Winchester sporting firearm by John Olin of Olin Mathieson Chemical Corporation. The firearm is a gold and silver inlaid and engraved Model 50 shotgun.

full energy in the deer and you may find the internal organs beat to a pulp but the tremendous reflexes of our game animal in question may carry him anywhere from 50 to 500 yards from where hit. Therefore, do not take it for granted you missed but spend a while investigating. Tie a red or white handkerchief on the brush where you stood and work from that spot so as to not lose your location. A deer's heart lies low in his brisket. Usually a shot thru the heart means a quick kill, but it is not always instantly fatal. A neck or spine shot is more deadly. Broken shoulders usually means a completely disabled animal while a lung shot with soft jacketed high speed bullets in anything from the new 6 M/M's to the 30/06 generally means meat on the table. Avoid rear end shots unless you are using powerful rifles like the 270 or the bigger 30's, with their heaviest bullets for deep penetration. If you have reason to believe you have a badly wounded deer,

don't ram along in hot pursuit but sit down and wait awhile. Give the animal a chance to lay down and stiffen up. Sometimes this pays unless you are in a concentrated area. In such a case the deer is usually lost to one of those characters who insist on calling "sportsmen."

Well fellows, we have discussed everything from the sublime to the ridiculous tonight which is really no unethical in our big deer camp. The dying embers of the old fireplace are quietly glowing and it's time to turn in. As you pull the blankets over you and give way to complete relaxation Morpheus wafts you into dreamland where big bucks are only phantoms. If your dreams come true tomorrow, don't be ashamed to put a sprig of hemlock in your trophy mouth and wear the "schutzenbruch" proudly on your hat until there isn't a needle left. Let your friends know you have enjoyed participating in "The Sport Of Kings." "Waidman hail" and happy 1959 to all.



Leonard Lee Rue III Photo

Annual Questions On Muskrat Trapping

By Larry J. Kopp

WHAT kind of bait should I use for muskrats?

As long as waterways are open, it is not necessary to use any bait at all. When streams freeze over, or when a heavy snow covers the natural food supply, muskrats can be attracted by using such bait as apples, celery, lettuce, or corn. Attach bait to a stake or at the base of a convenient sapling along riffles and other open spots—particularly at places where water from an underground spring enters the larger stream. The important thing is to set traps so that the animals are forced to cross over them in order to reach the bait.

Where should muskrats sets be made while streams are still free of ice?

At the base of slides, along riffles, where smaller streams enter the main stream, at feed beds, near rocks upon which the animal's habitually pause



to rest, and under over-hanging banks. In general, make sets where you find a concentration of muskrats tracks or other signs.

Should muskrat traps be set only where one finds signs?

No. Excellent sets can be made on the point where a stream makes a sharp bend, whether there are signs or not. Narrow passageways—natural or artificial ones—are also good set locations. Muskrats are attracted to them out of curiosity, but many times, hard ground or a gravel stream bottom makes it impossible to detect tracks.

What type of trap is best for making sets at muskrat slides?

The No. 1 under-spring type is most ideal. Do not set trap directly at base of slide. Prepare a level trap bed about ten or fifteen inches downstream from the slide. The reason for this, is that muskrats can be pretty wary about disturbances at slides to which they are so accustomed. A set made as suggested will take even the most cunning specimen by surprise!

What is the correct water depth for muskrat traps?

Approximately two inches so as to insure catching a muskrat by the front feet. The weight of the trap will then pull the animal face-down in deeper water, thus assuring drowned catches. If the water of the stream is less than six inches in depth, use stop-loss style traps, or at least set traps in about three inches of water. In this way a muskrat is more likely to be caught by a hind foot, in which case one seldom escapes.

How should muskrat traps be anchored?

Anchor them to rocks weighing at least two pounds, and place anchor out into deep water as far as chain will allow. Use wire, not string. Never anchor traps on dry land.

Is it true that muskrats go up one side of a stream to search for food, then return downstream on the other side?

A muskrat can be expected to do this. However, it is generally believed that a muskrat will travel upstream along the bank in which its den is located, then swim back downstream, more or less in the center of the stream, with a mouthful of food. At any rate, try always to set traps so that the spring points upstream. Muskrats rarely hug the bank when going downstream—swimming is more speedy.

How can I make a set along a high bank which slants nearly straight down into the water?

Use a trowel or small shovel and excavate what might be described as a—turn-out. You know, the sort of half-moonshaped turn-outs you find along roads where motorists may park off the road to rest. If the water is not too deep, a platform can be constructed, using flat rocks. The point is to have a level place for the trap. Do not set muskrat traps in a slanting position along steep bank.

If the water level suddenly rises after a heavy rain, should I retrieve my traps and reset them, or leave them until the stream recedes?

If you are an energetic trapper the best plan is to retrieve the traps at favorite sites and reset them. But do this in the late afternoon. If traps are reset early in the day, they will be entirely out of the water by nightfall.

Is there any way I can avoid getting my traps caught in an unexpected freeze-up?

If you want to be technical about it, you could check your weather forecaster, and if freezing temperatures are expected, take traps out of the water. A wise trapper plans ahead: When he begins to anticipate freezing weather, he tries to concentrate his traps at places where the stream is not likely to freeze over immediately. When traps are frozen into the ice, use a small ax and chisel through the ice all around them; then move the trap, ice and all, and let the ice melt.

What is the correct method of killing a live muskrat?

Hold it under water with a forked stick. Do not hit muskrats over the head. Also avoid stepping on the head in order to hold under water—you might end up with leaky boots, if muskrats have a vicious bite.



Hal H. Harrison Photo

The Archer's Yule

By Tom Forbes

OUTSIDE the window the white flakes fall silently to earth. A mantle of white shrouds the tall pine in the yard. Snow crystals reflect the light shining from the window until the pine glows like its small counterpart installed in a corner of the living room for the Christmas season. A partially burned log crumbles in the fireplace and in the glowing coals the reflection of camp fires mingles with the smell of pine. Relaxed and at ease the bowman watches the shifting play of the flames and pictures of

the season's hunt seem to materialize before his vision. The silent night recalls the majestic silence of the deep woods, the beauty of the maples, the beech groves and the stands of hemlock. No leaf stirs and the bowman concealed in his blind realizes that forces beyond his control have eased his tensions; and worries and problems, constant companions of his everyday world, have disappeared in the solitude and grandeur of the scene within his range of vision.

The rays of the morning sun top the nearest ridge and the opposite slope bursts into flaming color. In the fire the bowman again sees the vivid splashes of scarlet and gold spreading across the landscape. Small denizens of the woods chatter a welcome to another day. Close by a chipmunk, whose bark belittles his size, appears suddenly on top of a rotted stump.



Bright eyes survey the surroundings and quickly he scampers off in search of breakfast or in answer to a call of another of his kind. The noise of his passage through the rustling leaves fades away and the silence is broken only by the chatter of small birds as they exchange early morning gossip. A pine knot sputters and crackles in the fireplace and momentarily a chill comes over the bowman as he recalls the snap of a twig and the rustle of leaves in a nearby thicket. A form emerges, a black shapeless bulk against the background of trees, and bruin shuffles along busily engaged in searching for a meal of beech nuts which happily were in abundant supply. Suddenly he pauses. Raising his head, his nose tests the air. Gripping the arms of your chair you sit as motionless as you did in the blind. Sensing danger, bruin is no longer interested in his search for food. Slowly he turns and is engulfed by the thicket, the sound of his passage diminishing as he puts distance between himself and a danger he instinctively recognized. True, it was the any-deer season. Bruin was not legal game and you had not raised your bow, but you did have the thrill denied to many who charge aimlessly through the woods and complain about the scarcity of game. You had outwitted bruin in his natural surroundings and you are satisfied to have left him there.

Remembering cramped muscles you shift your position and relight your pipe. The scene changes, a doe accompanied by two fawns moves onto your woodland stage. Unaware of their audience the doe alternately raises her head to examine her surroundings and then joins the fawns in the search of mast in the form of beech nuts. Out of bow range they cross your front. Suddenly the scent of man reaches the doe. Immobile she stands, head and ears erect, she stares intently in your direction. Her fawns meanwhile continuing their breakfast

of beech nuts. Instinctively you try to squeeze lower in your chair; just as you did in the blind. Surely she must see you; gazing intently as she does in your direction. She stamps the ground with a front hoof. The fawns raise their heads and look at her. One lowers its head to resume eating; desisting when the doe again stamps the ground. Convinced that danger threatens, the doe snorts in alarm, wheels and accompanied by her fawns, they lope away with tails held high. Memories such as these are the intangibles that mean so much to those who love the out-of-doors. Gifts that cannot be purchased even at Xmas. Incidents that stand out and thrill us more than the actual kill which is after all an anti-climax. Who can answer satisfactorily the question of one who knows nothing of the out-of doors, when he asks "What did you get?" You cannot explain to him and were you to try he would not understand. So you reply "No luck," and feeling sorrow for him you direct the conversation in another channel.

The fire is dying. It is Christmas Eve. A smile passes over your face as your gaze falls on the pile of gift-wrapped packages under the Christmas tree. No amount of wrapping can disguise the outline of the new bow bought for Junior. Two years ago you bought him his first bow. Light enough so that he could draw it with comfort. Many happy hours you spent teaching him to shoot. He enjoys your companionship making you his confidant; and although he has not said so boasts about you to his circle of friends. When you bought him that first bow the top of his head did not reach your shoulder. Now his level gaze meets yours at the new bow is an exact duplicate of your own bow.

Tackle wears out in time. Shooting gloves must be replaced. Bow strings need to be renewed and new items of interest to the archer are constantly



coming on the market. In a family of archers you can be sure that the packages under the Christmas tree will cause faces to light up with a smile on Christmas morning. A set of aluminum arrows, spined for the new bow, and the correct length for his draw, will for moments leave him speechless. These he had not ex-

pected. For you a new bow quiver. Do you recall when you said in his presence; "I wish I had something else to put these arrows in. This quiver is a nuisance." He remembered and it is waiting under the tree in a package marked with your name.

TAKE CARE OF YOUR DEER

The Game Commission urges hunters who are successful in deer season to use care in handling the carcass. Venison, if properly handled and prepared, can be a valuable and tasty product of the hunt.

The animal's entrails should be carefully removed as soon as the deer is dead and the body cavity wiped dry with a clean cloth. The cavity should then be propped open to allow complete cooling. In transporting the deer from camp to home care should be taken to keep the carcass as cool as possible. Don't drape your deer over a front fender or the hood on your car; engine heat, even on a cold day, can spoil the meat. Venison will age and tenderize best if allowed to hang, hide removed, in 35 to 40 degree temperature for a week to ten days.

The deer hide has many uses; it should not be wasted. It may be sold by the original owner within 90 days after the close of the season. It is a source of better deer hunting in the future.

FREE SHOOTING PRESERVE GUIDE AVAILABLE

Help now is available for sportsmen having difficulty in finding a place to hunt. It is in the form of a handy new directory of public shooting preserves recently released by the Sportsmen's Service Bureau, according to the Wildlife Management Institute. It tells hunters where they may find excellent upland game shooting and sporty pass gunning for mallards.

The 1958 shooting preserve directory lists names and addresses of preserve operators, telephone numbers, and game released for hunting. Regional maps show the counties in which the preserves are situated. The pocket-sized folder also describes what hunters can generally expect at shooting preserves and outlines the advantages and pleasures of fee hunting.

Leading sporting goods stores and gas stations, in some instances, in the 30 States where preserves may operate should have copies of this useful directory. The leading American gun and ammunition makers will send copies upon request. In all instances the directory is furnished free.

Local rod and gun stores that desire copies may request them from the Sportsmen's Service Bureau, 250 East 43rd Street, New York 17, New York. Requests of individual sportsmen also may be sent to the same address.

SOIL CONSERVATION SOCIETY LAND USE BOOKLET AVAILABLE

Brought together in the booklet, "Land Utilization in the United States," are reprints of informative papers presented at a symposium on land use at the 11th Annual Meeting of the Soil Conservation Society of America in 1957, as reported by the Wildlife Management Institute. The articles, which had been published separately in issues of the Society's magazine, were compiled in a single booklet for the convenience of persons interested in land use considerations.

Problems of exploitation, conservation, requirements, inventories, rural and urban planning, wildlife, economics, and changing land patterns are discussed by prominent authors, including Paul B. Sears, H. H. Wooten, J. I. Anderson, Edward B. Wilkens, Frank W. Schaller, John F. Timmons, A. V. Bromely, and Frank W. Suggitt. Single copies of the booklet may be obtained from the Society, 838 Fifth Avenue, Des Moines, Iowa, at 50 cents. Discounts are granted on quantity orders.

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